949

Department of Energy
Ohio Field Office
Fernald Area Office
P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155

AUG 14 1997

DOE-1317-97

949

2-203

Mr. James A. Saric, Remedial Project Manager
U.S. Environmental Protection Agency
Region V-SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

TRANSMITTAL OF DESIGN CHANGE NOTICES FOR THE HAUL ROAD/RELOCATED NORTH ENTRANCE ROAD PROJECT, THE LEACHATE CONVEYANCE SYSTEM PROJECT, AND THE ON-SITE DISPOSAL FACILITY PROJECT

A commitment was made in an August 12, 1997, teleconference to send U.S. Environmental Protection Agency (U.S. EPA) and Ohio Environmental Protection Agency (OEPA) a complete set of approved Design Change Notices (DCN) for the Haul Road/Relocated North Entrance Road Project, the Leachate Conveyance System Project, and the On-Site Disposal Facility (OSDF)-Phase I Project. Beginning Monday, August 18, 1997, any new DCNs that have been approved in the previous week will be faxed each Monday to the U.S. EPA and OEPA. An OSDF representative will be available to discuss approved DCNs on the regularly scheduled Tuesday conference calls as necessary. If there are no new DCNs for a given week, a fax will be sent with a statement to that effect.

If there are any questions regarding OSDF construction activities, please contact Rod Warner at (513) 648-3156.

Sincerely,

Johnny Reising

FEMP:Warner

Johnny W. Reising
Fernald Remedial Action
Project Manager

Enclosure: As Stated

000001

cc w/enc:

T. Ontko, OEPA-Dayton
D. Ward, GeoTrans
R. Geiger, PRC
AR Coordinator/78

cc w/o enc:

N. Hallein, EM-42/CLOV
J. Jalovec, DOE-FEMP
S. Peterman, DOE-FEMP
J. Reising, DOE-FEMP
G. Jablonowski, USEPA-V, 5HRE-8J
R. Beaumier, TPSS/DERR, OEPA-Columbus
F. Bell, ATSDR
R. Vandegrift, ODOH
D. Carr, FDF/9
T. Hagen, FDF/65-2
J. Harmon, FDF/90
M. Hickey, FDF/64
U. Kumthekar, FDF/64
T. Walsh, FDF/65-2
EDC, FDF/52-7

Design Change Notice (DCN) Report for On-Site Disposal Facility (OSDF) - Phase I
Subcontract No. FY 597

DCN NO.	TITLE	DESCRIPTION	Transmitted to Agencies	
			U.S. EPA	OEPA
1702-001	RELOCATION OF CHIPPED MATERIAL	VOIDED	N/A	N/A
1702-002	STOCKPILE OF CHIPPED MATERIAL	Spread the chipped material from clearing and grubbing process in pine woods rather than stockpile in Subcontractor's work area.	8/18/97	8/18/97
1702-003	CHAIN LINK FENCE MODIFICATION	Use 7-foot high chain link fence fabric in a specified area.	8/18/97	8/18/97
1702-004	DRAINAGE CHANNEL GRAVITY INLET STRUCTURE	Revise the elevations and dimensions of the drainage channel gravity inlet structure.	8/18/97	8/18/97
1702-005	OSDF 480 VOLT POWER	Revise the location of poles which will supply power to the OSDF trailers.	8/18/97	8/18/97
1702-006	ALTERNATE ANTI-SEEP COLLAR	Use an alternate anti-seep collar.	8/18/97	8/18/97
1702-007	SUBMITTAL REQUIREMENTS	Modifies the submittal requirements for the installation of the geomembrane cap and liner.	8/18/97	8/18/97
1702-008	GEOTEXTILE SEPARATOR	VOIDED (Superseded by DCN 1702-014)	N/A	N/A
1702-009	GRAVEL SURFACING	Revises the gravel surfacing requirements for the sedimentation basin embankment.	8/18/97	8/18/97
1702-010	ANTI-SEEP COLLAR	Use Mastic in place of O-ring gaskets under certain conditions.	8/18/97	8/18/97

Design Change Notice (DCN) Report for On-Site Disposal Facility (OSDF) - Phase I
Subcontract No. FY 597

DCN NO.	TITLE	DESCRIPTION	Transmitted to Agencies	
			U.S. EPA	OEPA
1702-011	PLACEMENT OF STONE OVER GEOTEXTILE	Use Tee Pins and "tailgate" spreading of stone under approved conditions.	8/18/97	8/18/97
1702-012	PRINCIPAL SPILLWAY RIPRAP	Due to the sedimentation basin being moved east, additional excavation, geotextile, and Type C riprap will be necessary.	8/18/97	8/18/97
1702-013	COUPLING BAND FOR CORRUGATED METAL PIPE	Use 12-inch wide coupling bands in place of 24-inch wide for corrugated metal pipe.	8/18/97	8/18/97
1702-014	GEOTEXTILE SEPARATOR AND FILTER	This DCN supersedes DCN 1702-008 which has been voided. Use Tee Pins in place of spot sewing for the geotextile separator and filter in certain areas.	8/18/97	8/18/97
1702-015	GRANULAR DRAINAGE MATERIAL - MODIFIED 78s	WAITING FOR APPROVAL		
1702-016	EQUIPMENT DECONTAMINATION FACILITY	WAITING FOR APPROVAL		
1702-017	DECON FACILITY PUMP AND CHECK VALVE	WAITING FOR APPROVAL		
1702-018	SOIL STABILIZATION	Use the Hamm RACO 550 soil stabilizer in place of the RACO 250 model.	8/18/97	8/18/97
1702-019	ROCK FRAGMENT SIZE	Change the maximum rock size allowed in structural fill to half the lift thickness plus or minus 1 inch.	8/18/97	8/18/97

Design Change Notice (DCN) Report for On-Site Disposal Facility (OSDF) - Phase I
Subcontract No. FY 597

DCN NO.	TITLE	DESCRIPTION	Transmitted to Agencies	
			U.S. EPA	OEPA
1702-020	FIBERGLASS SHEET OVERSPRAY SIDING ON EQUIPMENT DECONTAMINATION FACILITY	WAITING FOR APPROVAL		
1702-021	ENGINEERING DESIGN CHANGES INCORPORATED IN SUBCONTRACT AMENDMENTS	Incorporate 4 design changes, or "amendments" that were made during the bid period for the OSDF Phase I construction contract.	8/18/97	8/18/97
1702-022	SUBGRADE PREPARATION	The subgrade cannot exhibit pumping or have ruts of 2 inches or more in depth.	8/18/97	8/18/97
1702-023	CLAY LINER PLACEMENT	The first lift of the clay liner over subgrade will be 10-inches thick instead of 7 or 8 inches.	8/18/97	8/18/97
1702-024	RIPRAP PROTECTION WIDTH	Add the 16' width for Riprap Type C Protection for the Sedimentation Basin culverts to the drawings.	8/18/97	8/18/97

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1702	(2)S/C NO.: FSC-597	(5)Pg OF	(6)DATE 5/15/97
(3)S/C TITLE: OSDF - PHASE I		(11)RCI NO.:	
(4) RESPONSIBLE DISCIPLINE: ☐E ☐M ☐C ☐OTHER	(4A)RCI/DCN TITLE: Stockpile of Chipped Material	(11)DCN NO.: 1702 : 002	

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Technical Specification Section ~~02210~~ 02110	20100-WGTS-0002 Rev A 02110 068 5-15-97	0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Technical Specification ~~02210~~ 02110 ~~068~~ 068 5-15-97 requires that chipped material from clearing activities be stockpiled in the subcontractors work area. To minimize costs of hauling, stockpiling, and stockpile maintenance in the subcontractor work area. The design change follows: Revise Article 3.03.E Section ~~02210~~ 02110 ~~068~~ 068 5-15-97 of the Technical Specification to read:

"E. Spread chipped cleared materials from the pine woods in OSDF Phase I area into the pine woods outside of the OSDF Battery limit as directed by C.

(10)REQUESTOR: R.E. Heath COMPANY: FDF DATE: 5/15/97

(12)FCE / PE DATE:

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES

(14)FOR DCN: ☒ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Daniel Bodino DATE: 15 May 97

(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE

PERFORMANCE GRADE: (17) 5 FOR R.E. HEATH

(18)CONSTRUCTION CONCURRENCE: DATE: 5-15-97

(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

PURCHASE REQUISITION REQUIRED: ☑ YES ☐ NO (19)

FS-F-4258 (10/01/96)

ENTERED

ORIGINAL

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE-

(1)WP / WO NO: 1702	(2)R/C NO: FSC-597	(3)PG OF	(4)DATE 5/29/97
(5)R/C TITLE: OSDF - PHASE I			(11)RCI NO:
(6) RESPONSIBLE DISCIPLINE: EO ☐ MO ☐ CE ☑ OTHER ☐	(6A)RCI/DCN TITLE: CHAIN LINK FENCE MODIFICATION		(11)DCN NO: 1702-003

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
20100-TS-0002 DCB SPEC. SECTION 02831 2.02 A		0	
DWG 90X-6000-G-00074 sheet (G-5B) DCB		2	
DWG-90X-6000-S-00088 sheet (S-5A) DCB			

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☑ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Substitute 7-ft high chain link fence fabric in lieu of 6-ft high chain link fence fabric between Point A (Pt A) and Point B (Pt B), as shown on attached Sketch-1 dated 5-29-97. Install line posts at Point A and Pt. B and along the length of the chain link fence, Chain link fence fabric, 1-ft high 3-barbed wire strands, and other fence accessories as specified in technical specification Section 02831. Chain link fence outside the limits between Pt. A and Pt. B shall be as specified in Section 02831.
Substitution of 7-ft high chain link fence fabric required to meet the FEMP security fence requirements.

(10)REQUESTOR: COMPANY:	DATE:	(12)FCE / PE	DATE:
MAUREEN ENDERLE JACOBS	5/29/97	[signature]	5/29/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☒ YES (14)FOR DCN: ☐ APPROVED ☑ APPROVED AS NOTED ☐ DISAPPROVED DCB

Document change on Drawing G-00074 (ie. relocate fence based on as-built coordinate locations) and add note on Drawing S-00088 as follows: "Between approximate coordinates N482,660, E1,350,560 and N482,165, E1,350,560 the chain-link fabric shall be 7-ft high and post braces 3.5-ft high."

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Daniel Bolling	02 June 97	

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 6/4/97

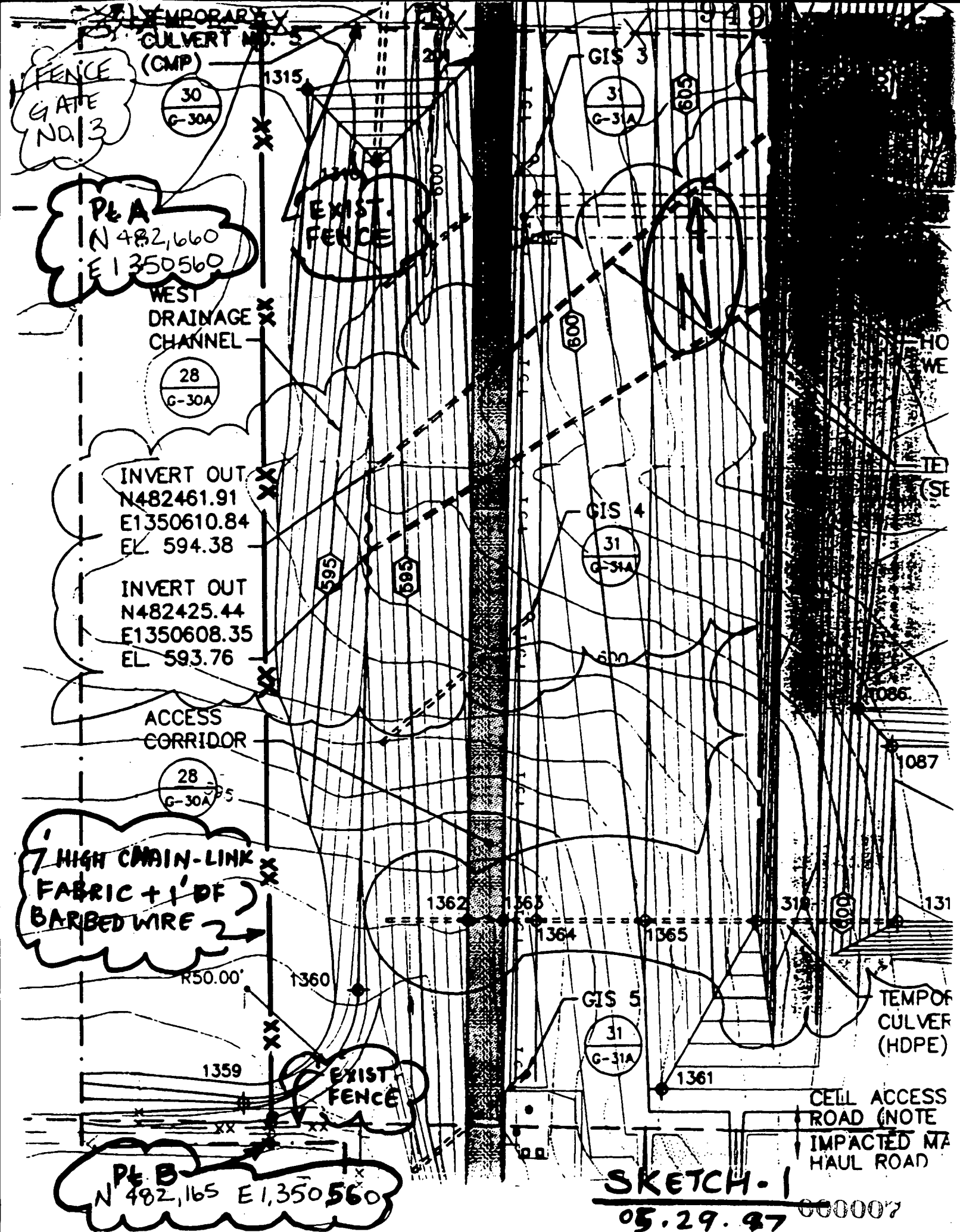
PERFORMANCE GRADE: (17) 5

(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
[signature]	6-4-97	-	

PURCHASE REQUISITION REQUIRED: ☑ YES ☐ NO (19)

FDF-2358 (10/01/96)

ORIGINAL


TEMPORARY
CULVERT NO. 5
(CMP)
FENCE
GATE
NO 3
30
G-30A
1315
GIS 3
31
G-31A
EXIST
FENCE
Pt A
N 482,660
E 1350560
WEST
DRAINAGE
CHANNEL
28
G-30A
INVERT OUT
N482461.91
E1350610.84
EL. 594.38
INVERT OUT
N482425.44
E1350608.35
EL. 593.76
GIS 4
31
G-31A
ACCESS
CORRIDOR
28
G-30A
1086
1087
7' HIGH CHAIN-LINK
FABRIC + 1' OF
BARBED WIRE
1362
1363
1364
1365
R50.00'
1360
GIS 5
31
G-31A
TEMPOR
CULVER
(HDPE)
1359
EXIST
FENCE
1361
CELL ACCESS
ROAD (NOTE
IMPACTED MA
HAUL ROAD
Pt B
N 482,165 E 1,350560
SKETCH-1
05.29.97
000007

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1702	(2)S/C NO.: FSC 597	(5)Pg 1 OF 5	(6)DATE June 9, 1997
(3)S/C TITLE: OSDF-PHASE 1 CONSTRUCTION			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	(4A)RCI/DCN TITLE: DRAINAGE CHANNEL GRAVITY INLET STRUCTURE		(11)DCN NO.: 1702-004

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Drawing No. 90X-6000-00085 & inc		0	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

1. Change Construction Control Points on Drawing No. G-00085 Rev. 0 as follows:

Point Nos.	Change
8101 thru 8104	Change elev. 598.71 to 598.67 ft.
8201 thru 8204	Change elev. 597.37 to 597.33 ft.
8301 thru 8304	Change elev. 595.71 to 595.67 ft.
8401 thru 8404	Change elev. 594.37 to 594.33 ft.
8501 thru 8504	Change elev. 592.71 to 592.67 ft.

2. Change Concrete Construction Dimensions as follows:
A) Section C: Remove 8 " concrete fnd. dimension and add 12 " full bottom thickness dimension.
Change height from 7' 4 " to 7' 5 ½ " .
Change Vortex Cap width from 5' 10 " to 6' 0 " .
Remove 7 " thickness for cap inside key and remove key, ie thickness will be 8 " all the way across. The 1' 1" opening will be the same. During construction installtion the cap must be centered over the structure.

(9)☐DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

2. (Continued)
B) Section A: Add foundation thickness of 12 " .
Change height from 7' 4 " to 7' 5 ½ ".
Change width of vortex cap from 5' 10 " to 6' 0 " .

C)Section B: Add foundation thickness of 12 " .
Change 3' 6 " height to 3' 6 ½ " .
Change 4' 11 ½ " height to 5' 0 " .
Change 4 ½" height to 5 ½ " .
Change width of vortex cap from 5' 10 " to 6' 0 " .

Attached are copies of Drawing Sections A, B, C, and the Control Point Table with the above changes marked or identified.

(10)REQUESTOR:	COMPANY:	DATE:	(12)FCE / PE	DATE:
Daniel Bodine	GeoSyntec	9June97		6/10/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES

(14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Daniel Bodine	9June97	

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 6/10/97

PERFORMANCE GRADE: (17) 5

(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
	6-10-97		

PURCHASE REQUISITION REQUIRED: ☐YES ☐NO

(19)

FS-F-4259 (10/01/96)

ENTERED

ORIGINAL

DRAINAGE CHANNEL GRAVITY INLET STRUCTURE CONSTRUCTION CONTROL POINTS (NOTE 7)

POINT NO.	NORTHING	EASTING	ELEVATION	POINT NO.	NORTHING	EASTING	ELEVATION
8101	482996.85	1350685.80	598.71	8306	482540.13	1350613.80	595.79
8102	482994.99	1350687.61	598.71	8307	482601.75	1350675.71	599.20
8103	482993.18	1350685.76	598.71	8308	482601.67	1350681.63	599.20
8104	482995.04	1350683.95	598.71	8309	482591.67	1350681.51	599.12
8105	482994.07	1350684.62	599.67	8310	482591.75	1350675.59	599.12
8106	482939.88	1350618.42	598.79	8401	482396.90	1350678.47	594.37
8107	483001.72	1350680.60	602.20	8402	482395.04	1350680.28	594.37
8108	483001.64	1350686.52	602.20	8403	482393.23	1350678.42	594.37
8109	482991.64	1350686.40	602.12	8404	482395.08	1350676.61	594.37
8110	482991.72	1350680.48	602.12	8405	482394.11	1350677.29	595.33
8201	482796.87	1350683.36	597.37	8406	482340.12	1350611.32	594.30
8202	482795.01	1350685.17	597.37	8407	482401.76	1350673.27	597.70
8203	482793.20	1350683.31	597.37	8408	482401.69	1350679.19	597.70
8204	482795.05	1350681.50	597.37	8409	482391.69	1350679.06	597.62
8205	482794.08	1350682.17	598.33	8410	482391.76	1350673.15	597.62
8206	482739.61	1350615.63	597.29	8501	482196.91	1350676.02	592.71
8207	482801.73	1350678.16	600.70	8502	482195.05	1350677.84	592.71
8208	482801.66	1350684.07	600.70	8503	482193.24	1350675.98	592.71
8209	482791.66	1350683.95	600.62	8504	482195.10	1350674.17	592.71
8210	482791.73	1350678.04	600.62	8505	482194.38	1350675.15	593.67
8301	482596.88	1350680.91	595.71	8506	482152.58	1350624.08	591.74
8302	482595.02	1350682.72	595.71	8507	482201.77	1350670.82	596.20
8303	482593.21	1350680.87	595.71	8508	482201.70	1350676.74	596.20
8304	482595.07	1350679.06	595.71	8509	482191.70	1350676.82	596.12
8305	482594.10	1350679.73	596.67	8510	482191.77	1350670.70	596.12

NOTES:

DETAILS ARE SHOWN TO SCALE AS NOTED EXCEPT FOR THE GEOSYNTHETICS, WHICH ARE SHOWN AT AN EXAGGERATED SCALE FOR CLARITY. MATERIAL TOLERANCES SHALL BE WITHIN THE LIMITS GIVEN IN THE SPECIFICATIONS.

GRAVITY DRAINAGE INLET STRUCTURES SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 03100.

REINFORCED CONCRETE PIPE CULVERTS AND JOINTS SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02721.

TRENCHING AND BACKFILLING SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02215.

ANTI-VORTEX SUPPORTS DO NOT APPEAR IN ALL SECTIONS. SEE PLAN ON THIS SHEET FOR LOCATIONS.

LCS AND LDS MANHOLES ARE NOT SHOWN IN THIS SECTION.

CONSTRUCTION CONTROL POINTS ASSOCIATED WITH DRAINAGE CHANNEL GRAVITY INLET STRUCTURES ARE

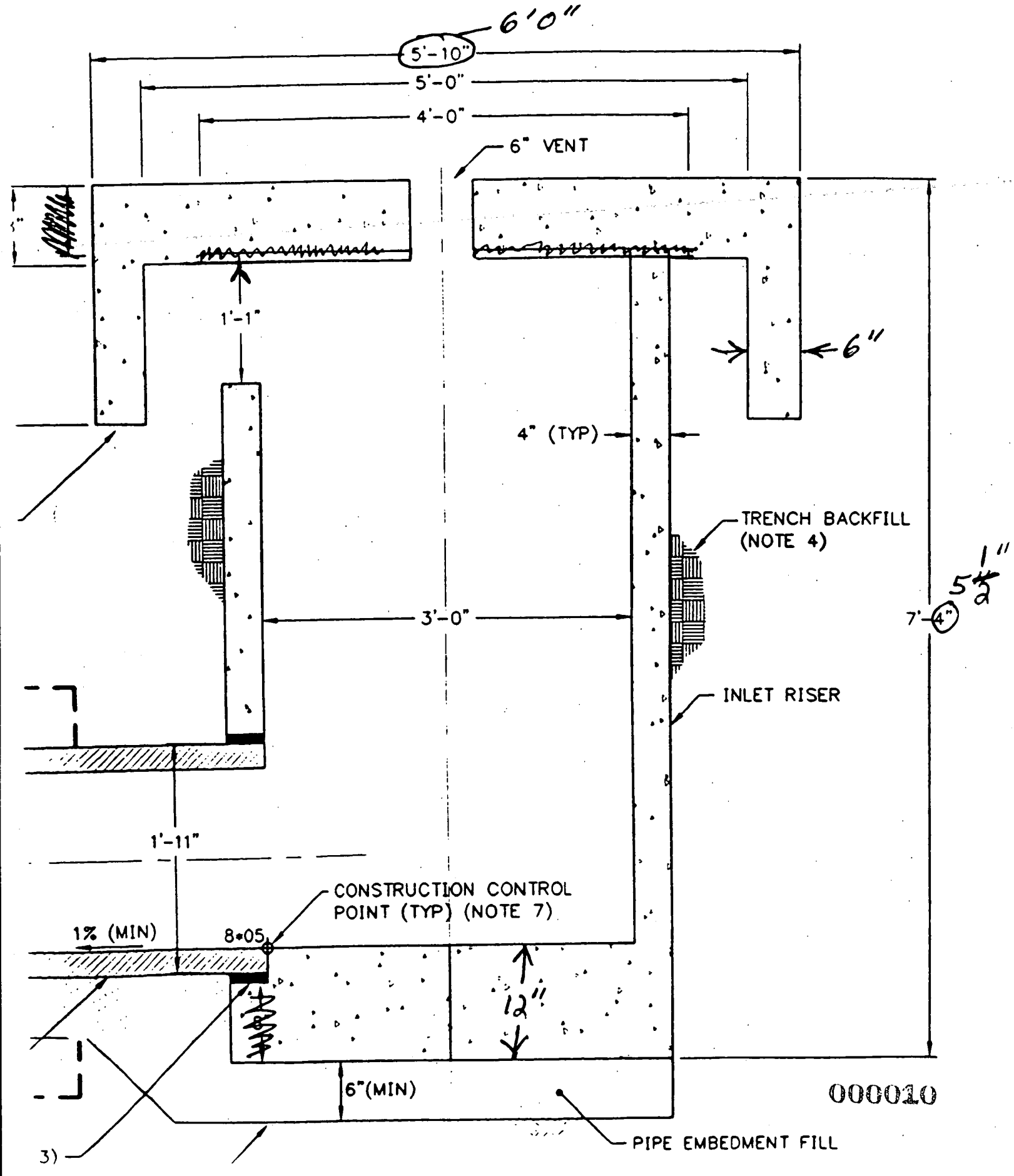
CONTROL POINT TABLE

Page 2 of 5
DCN No. 1703-004
949

SECTION C

℄ DRAINAGE CHANNEL
GRAVITY INLET STRUCTURE

AND CULVERT



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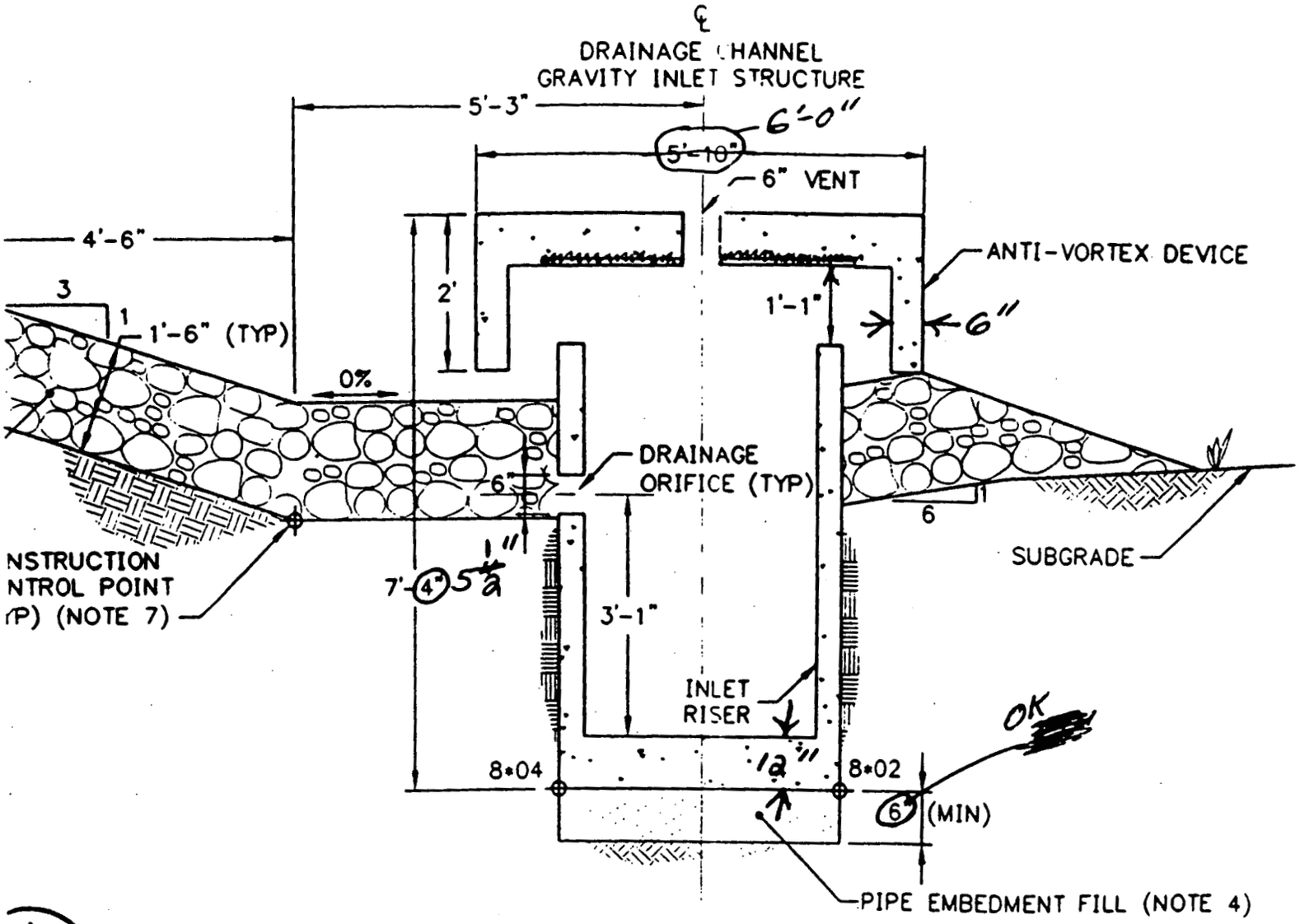
CHANNEL GRAVITY INLET STRUCTURE AND CULVERT

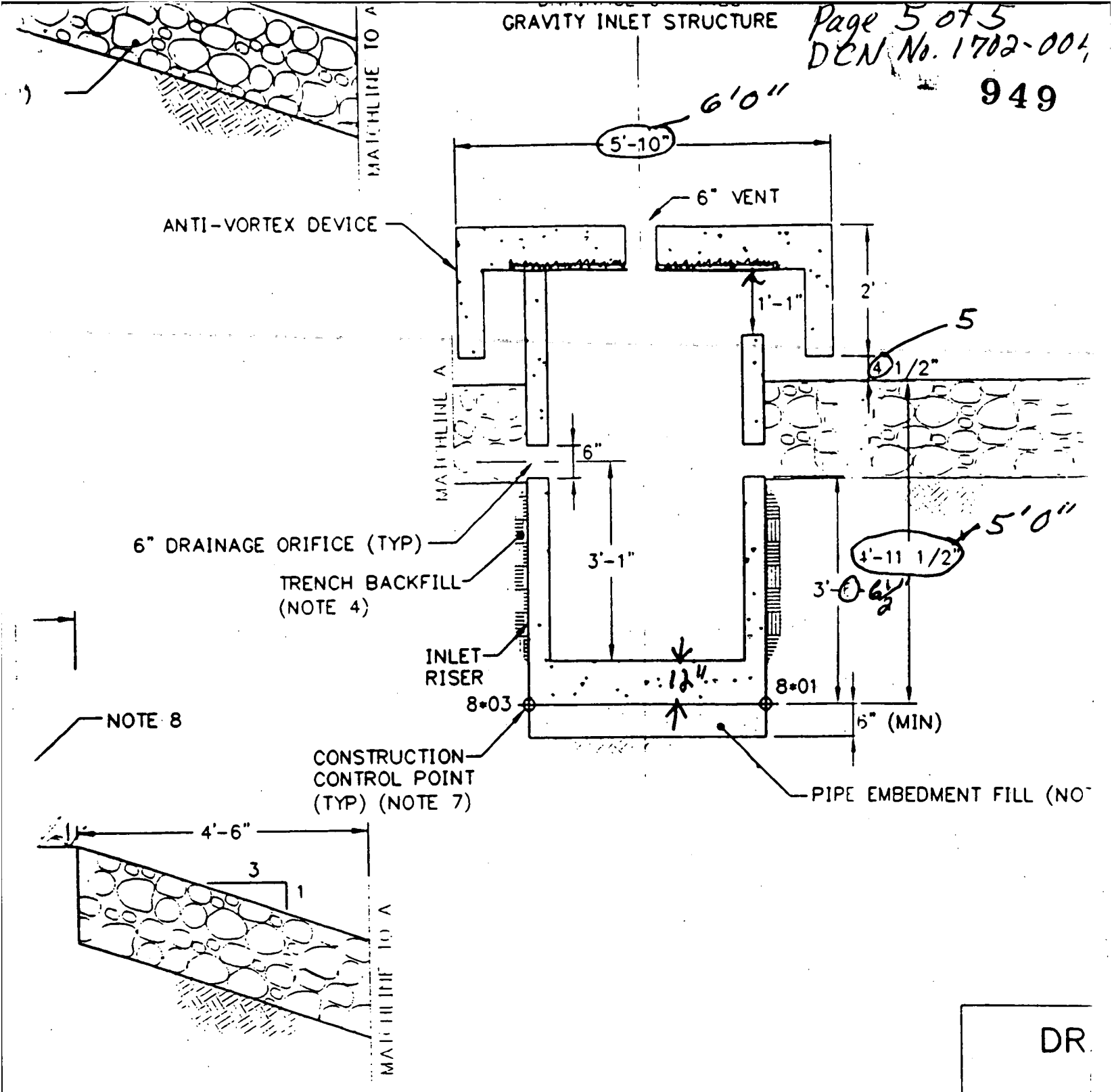


A
-

SECTION
DRAINAGE CHANNEL GRAVITY INLET STRUCTURE AND
(NOTE 1)
SCALE: 1" = 2'

SECTION A

000011



POINT NO.
8101
8102
8103
8104
8105
8106
8107
8108
8109
8110
8201
8202
8203

DR

JNEL GRAVITY INLET STRUCTURE AND CULVERT

SECTION B

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 1702	(2)S/C NO.: 597	(5)Pg 1 OF 1	(6)DATE 6-17-97
(3)S/C TITLE: ON SITE DISPOSAL FACILITY			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E☒ M☐ C☒ OTHER☐	(4A)RCI/DCN TITLE: O.S.D.F. 480 VOLT POWER		(11)DCN NO.: 1702 - 005

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
480 VOLT FEED TO OSDF TRAILER	90X-5500-E-00506 90X-5500-E-01507	0 0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☒ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

1. SIX POWER POLES TO BE INSTALLED PER THE ABOVE DWGS.
2. POLES TO RUN SOUTH, THEN EAST, RATHER THAN AS SHOWN DUE TO INTERFERENCES NORTH, THEN EAST AS SHOWN.
3. ALL POLE HARDWARE, WIRE & CABLE, DISCONNECT SWITCHES AND TRANSFORMER TO REMAIN THE SAME.
4. PETRO ENVIRONMENTAL'S ELECTRICAL SUB - TO INSTALL
5. ALL COORDINATES CHANGED WILL BE RECORDED AND FORWARDED TO ENGINEERING.
6. POWER INSTALLATION TO BE COMPLETE BY 7-15-97
7. REFERENCE DCN # 1700-037 ATTACHED.

(10)REQUESTOR:	COMPANY:	DATE:	(12)FCE / PE	DATE:
[signature]	F.S.F	6-17-97	James C. Jenkins	6/18/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES

(14)FOR DCN: ☒ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

Jim KEAL MS-81-3 RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
James E. Kerl	6-19-97	2CC08

(16)FOF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE

PERFORMANCE GRADE: (17)4 James C. Jenkins 7/1/97

(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
[signature]	7-1-97		

PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)

F-4259 (10/01/96)

ORIGINAL

ENTERED

000013

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE

(1)WP / WO NO.: 1702	(2)S/C NO.: FSC 597	(5)Pg 1 OF 2	(6)DATE 26 June 97
(3)S/C TITLE: OSDF- PHASE 1 CONSTRUCTION			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	(4A)RCI/DCN TITLE: ALTERNATE ANTI-SEEP COLLAR		(11)DCN NO.: 1702-006

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
DRAWING ~~90X-G-6000-00089~~ 90X-6000-G-00089	Detail 50	0	
See DCN #1702-010 QGB 7/1/97			

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Civil Review only

During the submittal review process an alternate anti-seep collar was reviewed and accepted for the sedimentation basin. The alternate allows the use a galvanized corrugated diaphragm (collar) fabricated in two halfs (top and bottom) and banded with O-ring gaskets to ~~be~~ continuous sections of cmps. Hugger type O-rings shall be used. Upper and lower halfs shall be sealed with sleeve gaskets. A continuous weld along the band on one side will be allowed. A vendor submittal detail is attached. All cmp requirements remain.

(10)REQUESTOR:	COMPANY:	DATE:	(12)FCE / PE	DATE:
Daniel Bolin	GeoSyntec	26 June 97		6/26/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES (14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

RCI - DCN ACCEPTANCE

GEOSYNTEC (15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Daniel Bolin	26 June 97	

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 6/26/97

PERFORMANCE GRADE: (17) 5

(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
	7/01/97		

PURCHASE REQUISITION REQUIRED: ☐YES ☒NO (19)

FS-F-4259 (10/01/96)

ORIGINAL

ENGINEER

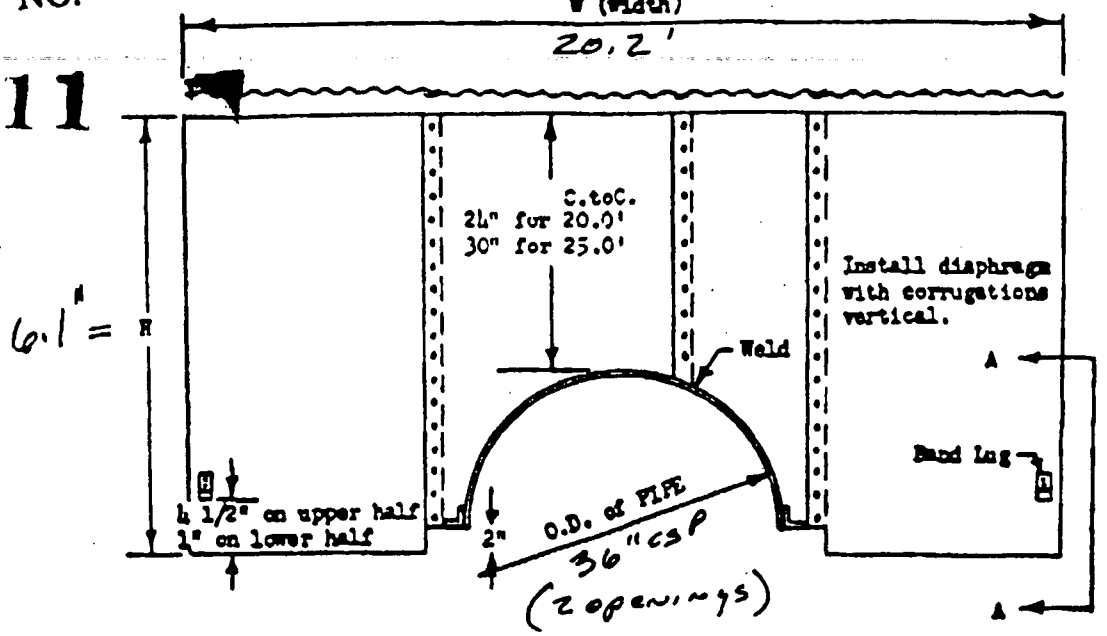
DIAPHRAGM

CONTECH CONSTRUCTION PRODUCTS, INC.

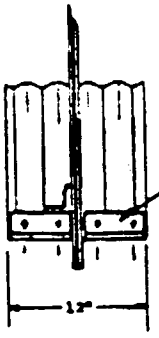
LIST PRICES

CONTROLLED COPY NO. 011

DATA ON DIAPHRAGM



ONE HALF DIAPHRAGM SHOWN, OTHER HALF SAME EXCEPT BAND LUG LOCATION



A - A

An alternate method of connection is to eliminate the band angles, and substitute four 1/2" rods, with silo type lugs for connection.

SPECIFICATIONS

1. Corrugated Metal shall conform to current ASTM Specs:
   Aluminum B744
   Steel A444
2. Steel Diaphragms to be fully bituminous coated .05 inch thick.
3. Lap between two half sections should be caulked at time of installation.

Dia. (In.)	Gage	W (Width) In. c.c. spacing 20 Ft.	W (Width) In. c.c. spacing 25 Ft.	H (Height) c.c. spacing 20 Ft. Unstrutted	H (Height) c.c. spacing 20 Ft. Strutted	H (Height) c.c. spacing 25 Ft. Unstrutted	H (Height) c.c. spacing 25 Ft. Strutted
12	16	64	72	32 1/2		38 1/2	
15	16	64		34		40	
18	16	69 1/4	77 1/4	35 1/2		41 1/2	
21	16	72		37		43	
24	14	72		38 1/2		44 1/2	
30	14	82 1/2		44 1/2		47 1/2	
36	12	88	96	44 1/2		50 1/2	
42	12	93 1/4	101 1/4	47 1/2		53 1/2	
48	12	98		50 1/2	51 3/4	56 1/2	57 3/4
54	12	106 1/2		53 1/2	54 7/8	59 1/2	60 7/8
60	10	112	120	56 1/2	58	62 1/2	64
66	10	117 1/4		59 1/2	61 1/8	65 1/2	67 1/8
72	10	120		62 1/2	64 1/4	68 1/2	70 1/4
84	8	136	144	68 1/2	70 1/2	74 1/2	76 1/2

000015

Dwg. No. 103195 Rev. 11/15/55

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1702	(2)S/C NO.: FSC 597	(5)Pg 1 OF 1	(6)DATE 26 June 97
(3)S/C TITLE: OSDF- PHASE I CONSTRUCTION			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	(4A)RCI/DCN TITLE: Submittal Requirements		(11)DCN NO.: 1702-007

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Spec. 20100-TS-0002 Section 02770	Part 1.05	0	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Part 1.05. A.2 and Part 1.05, A.5 Change
"A list of 10 completed facilites..."
to "A list of at least 10 completed facilities..."

This change will allow a list greater than 10 facilities to be submitted which was originally intended.

(10)REQUESTOR:	COMPANY:	DATE:	(12)FCE / PE	DATE:
Daniel Bodine	GeoSyntec	26 June 97	[signature]	6/26/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES (14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

GeoSyntec — RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Daniel Bodine	26 June 97	

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE:

PERFORMANCE GRADE: (17) 4 [signature] 6/26/97

(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
[signature]			

PURCHASE REQUISITION REQUIRED: ☐YES ☒NO (19)

FS-F-4259 (10/01/96)

ORIGINAL

EXCELLENCE

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1702	(2)S/C NO.: FSC 597	(5)Pg 1 OF 1	(6)DATE 26 June 97
(3)S/C TITLE: OSDF- PHASE I CONSTRUCTION			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	(4A)RCI/DCN TITLE: GRAVEL SURFACING		(11)DCN NO.: 1702-009

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Drawing 90X-6-6000-00089		0	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☐DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Civil Review Only

Revise Note 2 as follows:

2. Gravel Surfacing along the crest of the Sedimentation Basin Embankment shall be Ohio DOT Aggregate Base in accordance with Item 304.02, except slag shall not be used. AASHTO No. 57 Stone shall be used around the 8-inch Perforated CMP low-flow risers as orginally specified.

(10)REQUESTOR: Ranil Badoe COMPANY: GeoSyntec DATE: 26 June 97

(12)FCE / PE [signature] DATE: 6/30/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☒YES (14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Ranil Badoe-GeoSyntec DATE: 26 June 97

(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) [signature] DATE: 6/30/97

PERFORMANCE GRADE: (17) 5

(18)CONSTRUCTION CONCURRENCE: [signature] DATE: 07/01/97

PURCHASE REQUISITION REQUIRED: ☐YES ☒NO (19)

(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE: 6/20/97

FS-F-4259 (10/01/96)

ORIGINAL

ENTERED

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REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE

(1)WP / WO NO.: 1702	(2)S/C NO.: FSC-597	(5)Pg OF 1 1	(6)DATE 6/27/97
(3)S/C TITLE: OSDF PHASE I CONSTRUCTION		(11)RCI NO.:	
(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☒ OTHER☐	(4A)RCI/DCN TITLE: Anti-Seep Collar	(11)DCN NO.: 1702-010	

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
DCN 1702-006		0	
DRAWING 90X-6000-G-00089 Sht 10			

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER
NOTE: CIVIL REVIEW ONLY.

(9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

As An Alternate To Using O-Ring Gaskets; Permit Use Of "Mastic".

6/30/97

(10)REQUESTOR: Don Goetz	COMPANY: Fluor Daniel Fernald	DATE: 6/27/97	(12)FCE / PE	DATE: 6/30/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES (14)FOR DCN: ☐APPROVED ☒APPROVED AS NOTED ☐DISAPPROVED

Placement of mastic must be thick and continuous to insure a tight seal when band is fully tighten. O-Ring Gaskets shall be used on end sections of pipe as recommended in the specifications and by the pipe manufacturer.

GeoSyntec

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Daniel Bedford	DATE: 27 June 97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:	
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY)		6/30/97	DATE 6/30/97
PERFORMANCE GRADE: (17) 5			
(18)CONSTRUCTION CONCURRENCE:	DATE: 07/01/97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
~~PURCHASE REQUISITION REQUIRED: ☐YES ☐~~NO (19)			

FS-F-4259 (10/01/96)

RECEIVED 000018

ORIGINAL

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

DGB 11 July 97

(1) WP / WO NO.:	(2) S/C NO.:	(5) P 1 OF 2	(6) DATE
1702	597		7/8/97

(3) S/C TITLE: On Site Disposal Facility Phase I

(11) RCI NO.: —

(4) RESPONSIBLE DISCIPLINE: E [ ] M [ ] C [X] OTHER [ ]

(4A) RCI/DCN TITLE: Placement of Stone Over Geotextile

(11) DCN NO.: 1702-011

(7) DOCUMENTS AFFECTED	(7) DOCUMENT NOS.	(7) REV.	(8) OTHER
Specification Section 02714, Para. 3.05D and 3.05.F DGB 11July97	~~(Attached)~~ DGB 11July97	0	None

(9) [ ] RCI - INQUIRY [ ] USQD SCREENING BY PROJECT ENGINEER

(9) [X] DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Referenced specification does not allow equipment to be driven directly on geotextile. We believe that the intent of the specification is to limit traffic and potential damage to the cell liner system. We propose that the specification be revised to allow the geotextile separator fabric, found under gravel roadways, to be placed and pinned. Gravel trucks would then "tailgate" spread the material over the fabric, an industry accepted standard practice. Trucks shall tailgate in a straight line to eliminate potential rutting caused by sharp turns. Rutting of subgrade should not be a concern, as the embankment has been placed and compacted in compliance with project specifications. No material shall be placed on wet subgrade, where excessive rutting would occur. Due to the thin lift of the gravel surface, we feel that (4") is the best way to provide for a quality finished product without damaging the geotextile.

Civil Review Only

(10) REQUESTER:	COMPANY:	DATE:	(12) FCE / DE:	DATE:
Steve Brandstetter	Petro Environmental Technologies, Inc.	7/9/97		7/9/97

(13) RESPONSE FOR RCI, IS A DCN REQ'D [ ] NO [X] YES (14) FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

See Attached Page 2

RCI - DCN ACCEPTANCE

(15) DESIGN ORGANIZATION APPROVAL:	DATE:	(20) CHARGE NO. FOR CADD SERVICES TO INCORPORATE
Daniel Boling	11 July 97	

(16) FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 7/12/97

PERFORMANCE GRADE: (17) 5

(18) CONSTRUCTION CONCURRENCE: 7/14/97

PURCHASE REQUISITION REQUIRED: [ ] YES [X] NO

FS-F-4259 (10/01/96)

ORIGINAL

000019

(13) RESPONSE

DCN No. 1702-014 approved the use of minimum 8-inch Tee Pins for use in placing Geotextile Separator fabric. The use of the "tailgate" spreading of stone over the Separator fabric for the Sedimentation Basin and Access Corridor (NOTE: Cell Access Road NOT INCLUDED) will be approved under the following conditions.

1. Subgrade/fill proofrolled or compacted as specified, graded and sealed such that rutting under truck traffic will not occur. QC to monitor full time.

2. Roll out Separator fabric, make taut and pin as necessary. QC to monitor full time.

3. Grade stone and perform minimum thickness measurements. Add additional stone if necessary.

Specification Section 02714 Part 3.05.E shall be revised by adding the following sentence.

Tailgate spreading over the geotextile of road stone may be used for the Sedimentation Basin gravel road and the Access Corridor under conditions approved in writing by the Construction Manager. Note that the Cell Access Road is NOT INCLUDED for this alternate placement procedure.

Daniel Bodine
11 July 97

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1702	(2)S/C NO.: FSC- 597	(5)Pg 1 OF 1	(6)DATE 9 July 97
(3)S/C TITLE: OSDF Phase 1 Construction			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	(4A)RCI/DCN TITLE: Principal Spillway Riprap		(11)DCN NO.: 1702-012

(7)DOCUMENT	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Drawing 90X-6000-G-00089 Sheet G-41A	Section A	0	
Drawing G-41A Submittal No. 20	Section A	0	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☐DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

The location of the Sedimentation Basin has been moved east . This move resulted in the Principal Spillway pipe discharge points being located farther from the existing ditch. Additional excavation, Geotextile and Type C Riprap will be required for the completed spillway to extend to the ditch.

Drawing G-00089 Section A shall be revised by changing the 35 feet to 60 feet at the centerline between the two CMPs. The width of the riprap at the pipe discharge end and at the 60-foot point at the ditch shall be 15 feet and 23 feet, respectively.

This change is intended to extend the riprap to the existing ditch. West of the spillway centerline the length of the spillway will be less than 60 feet and east of the centerline the length will be greater than 60 feet.

As-built drawings shall document the extent of the spillway based on field surveys.

The geotextile shall extend beneath the sides and bottom of the riprap.

Drawing G-41A in Submittal No. 20 is a copy of Drawing G-00089.

(10)REQUESTOR: Daniel Bodine COMPANY: GeoSyntec (12)FCE / PE [signature] DATE: 7/10/97 7/14/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☒YES (14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Daniel Bodine DATE: 9 July 97 (20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) [signature] DATE: 7/10/97

PERFORMANCE GRADE: (17) 5

(18)CONSTRUCTION CONCURRENCE: [signature] DATE: 7/10/97 (21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) [signature] DATE: 7/14/97

PURCHASE REQUISITION REQUIRED: ☐YES ☒NO (19)

FS-F-4259 (10/01/96)

ORIGINAL

000021

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1702	(2)S/C NO.: FSC- 597	(5)Pg 1 OF 1	(6)DATE 11 July 97
(3)S/C TITLE: OSDF Phase 1 Construction			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	(4A)RCI/DCN TITLE: Coupling Band For Corrugated Metal Pipe		(11)DCN NO.: 1702-013

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Drawing 90X-6000-G-00089 Sheet G-41A (DWG)	Details 47 and 49	0	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

Civil Review Only.

The corrugated metal pipe (CMP) supplied and delivered to the site by the contractor is produced from Hel- Cor Pipe which has helical corrugations.

The pipe ends have been re-rolled to accept standard 12-inch wide coupling bands. Drawing G-00089 Details 47 and 49 show 24-inch wide bands. Since all CMP on the project are part of temporary structures, the use of standard 12-inch wide coupling bands will be approved.

(9)☐DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Drawing changes will be as follows:

Detail 47 - Coupling band shown will be redrawn at 12-inches wide centered over the pipe joint

Detail 49 - Coupling band shown will be redrawn at 12-inches wide centered over the pipe joint. The stated 24-inches wide will be changed to 12-inches and the wording " with 9 Corrugations" will be removed..

(10)REQUESTOR: Daniel Bolen	COMPANY: GeoSyntec	(12)FCE / PE: [signature]	DATE: 7/12/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES

(14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Daniel Bolen	DATE: 11 July 97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:	
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) [signature]			DATE: 7/12/97
PERFORMANCE GRADE: (17) 5			
(18)CONSTRUCTION CONCURRENCE: [signature]	DATE: 07/16/97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☐YES ☒NO (19)			

FS-F-4259 (10/01/96)

ORIGINAL

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ENTERED

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1702	(2)S/C NO.: FSC- 597	(5)Pg 1 OF 1	(6)DATE 11 July 97
(3)S/C TITLE: OSDF Phase 1 Construction			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	(4A)RCI/DCN TITLE: Geotextile Separator and Filter		(11)DCN NO.: 1702-014

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Specification 20100-TS-0002 Section 02714	Part 3.02	0	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☐DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Civil Review Only. This DCN supersedes DCN 1702-008 which has been voided.

The specification, Part 3.02.C, requires the Geotextile Separator to be spot sewn. An alternate method of holding down the fabric is pinning the fabric with minimum 8-inch Tee Pins at spacing of 10-feet or less. This will be allowed for the Sedimentation Basin and the Access Corridor ONLY. Note that the Cell Access Road is not INCLUDED.

Add the following two sentences to Part 3.02.C . Pinning with minimum 8-inch Tee Pins is approved in-lieu of spot sewing for the Sedimentation Basin and Access Corridor ONLY. Pinning intervals shall not be greater than 10 feet in length."

The Geotextile Filter for the Sedimentation Basin ONLY may also be pinned with minimum 8-inch Tee Pins. If pins are used, the minimum overlap shall be 12-inches. Add sentence to Part 3.02.A as follows: " Exception to this is the Sedimentation Basin filter which may be spot sewn or pinned with minimum 8-inch Tee Pins at intervals not to exceed 10 feet and as necessary to ensure that a 12-inch overlap is maintained.

(10)REQUESTOR:	COMPANY:	(12)FCE / PE	DATE:
Daniel Bolen	GeoSyntec	[illegible]	7/12/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES

(14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Daniel Bolen	11 July 97	

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 7/12/97

PERFORMANCE GRADE: (17) 5

(18)CONSTRUCTION CONCURRENCE: 07/16/97	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☐YES ☒NO (19)			

FS-F-4259 (10/01/96)

ORIGINAL

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ENTERED

94

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

2 DGS

(1) WP / WO NO.:	(2) S/C NO.:	(5) P 1 OF 1	(6) DATE
1702	597		7/17/97

(3) S/C TITLE: On Site Disposal Facility Phase I

(11) RCI NO.: —

(4) RESPONSIBLE DISCIPLINE: E [ ] M [ ] C [X] OTHER [ ]

(4A) RCI/DCN TITLE: Soil Stabilization

(11) DCN NO.: 1702-018

(7) DOCUMENTS AFFECTED	(7) DOCUMENT NOS.	(7) REV.	(8) OTHER
Specification Section 02225, Para. 2.02 (E)		0	None

(9) [ ] RCI - INQUIRY [ ] USQD SCREENING BY PROJECT ENGINEER

(9) [ ] DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Civil Review Only

Permit use of Hamm Raco 550 Soil Stabilizer with water spray bar attachment. The rotors for both the Raco 550 and 250 Models are the same specifications and dimensions. Attached are technical specifications for each model. The Raco 550 has more safety features and better tractive and processing controls that can improve the clay processing and rock picking operations.

(10) REQUESTER:	COMPANY:	DATE:	(12) FCE / PE	DATE:
Dave Williams	Petro Environmental Technologies, Inc.	7/17/97	[signature]	7/24/97

(13) RESPONSE FOR RCI, IS A DCN REQ'D [ ] NO [ ] YES (14) FOR DCN: [ ] APPROVED [X] APPROVED AS NOTED [ ] DISAPPROVED

Comments on Page 2

This equipment change affects parts of the earthwork plan including rock picking and compaction. An addendum to the earthwork plan must be prepared and approved by OEPA prior to use in clay processing.

RCI - DCN ACCEPTANCE

(15) DESIGN ORGANIZATION APPROVAL:	DATE:	(20) CHARGE NO. FOR CADD SERVICES TO INCORPORATE
Ranil Bodina	25 July 97	

(16) FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE:

PERFORMANCE GRADE: (17) 4 — Released 7/28/97

(18) CONSTRUCTION CONCURRENCE: [signature] 07/29/97

PURCHASE REQUISITION REQUIRED: [ ] YES [X] NO

FS-F-4259 (10/01/96)

ORIGINAL

000024

(13) Response to DCN 1702-018

25 July 1997

Review of the attached technical data indicates that the RACO Model 550 Soil Stabilizer is essentially a more powerful, 4 wheel drive, air conditioned stabilizer with a slight larger range of options, made by the same manufacturer. Therefore, the Model 550 is judged functionally equivalent to the RACO Model 250 Soil Stabilizer and in accordance with project specifications and design criteria.

Daniel Bodine, P.E., Resident Engineer

Daniel Bodine 25 July 97

HAMM COMPACTORS Inc.

July 11, 1997

Base Construction, Inc.
7500 Industrial Parkway
Plain City, Ohio 43064
Attn: Mr. Chris Anspaugh, V.P.

Re: RACO 550 and 250 Reclaimer rotor specification.

Dear Chris,

This will serve to inform you concerning the above subject.

The rotors for both the RACO 550 and 250 models are the same specifications and dimensions.

There is a difference in the prime movers such as horse power, weight and the propel systems.

I hope this helps with you request, should you have any questions please call.

Best regards,

Phillip W. Wise, V.P.
RACO Division
HAMM Compactors, Inc.

000026

2611 East Pioneer Drive
Irving, Texas 75061
Tel. (214) 554-6690
Fax (214) 554-7211

HAMM

Description:
Soil stabiliser / Asphaltrecycler RACO 550

Technical data RACO 550

Weights

Operating weight with cab	55,125 lbs.

Dimensions

Total length	386"
Total width	117"
Height with cab	125"
Turning radius inside	197"
Turning radius outside	359"

Engine

MWM-Deutz Diesel, 4-stroke, water-cooled, 8 cylinders	Type TBD 616 V8 Turbo
Performance to ISO 3046/1	440 kW/600 HP at 2000 rpm
Air filter	FAPR
Fuel tank	1,100 ltr

Drive

Hydrostatic drive, infinitely variable, electrically controlled, 2 speed transmission, planetary shaft with lamel brakes and differential lock

Speed

low	0-1.9 mph
high	0-9.5 mph

Rotor

Hydrostatic drive, electrically controlled, infinitely variable

Rotor	universal		tubular
	Stabiliser	Recycling	Recycling
Working width	92"	92"	92"
Working depth	20"	20"	18"
Diameter	59"	59"	54"
Number of spades	87	-	-
Number of teeth	-	174-261	242
Revolution rpm	100-200	100-200	100-200

Steering

4-wheel-drive with 3 steering modes controlled from the instrument panel.

Brakes

Service brake: hydrostatic and dynamic
Parking brake: hydrostatic multiple disc brake in oil basin

Tires

Front/Rear	28LR26 TL

Electrical system

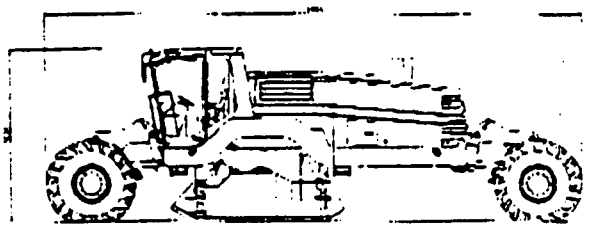
Operating voltage 24 V, 2 batteries of 160 Ah each

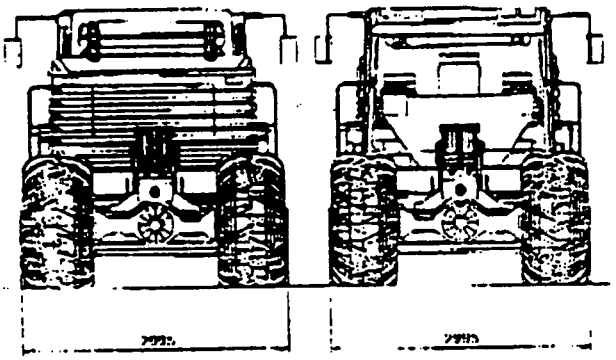
Standard equipment

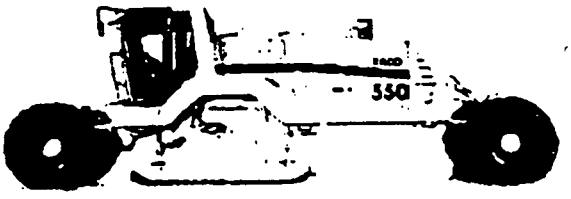
Comfortable cab. Airconditioning. Working lights at front and rear. Inside and outside mirror. ROPS. Universal rotor for stabilisation or recycling. Noice reduced engine hood. Double driving stand with suspended seat. Complete instrument panel. Emergency-stop button. Disconnectable rotor. 2 supplementary emergency stop buttons from each side of the frame. Back-up alarm. Rotor and mixer chamber made of abrasion proof special steel. Mixer door hydraulically adjustable. Rotor depth control. Automatic engine shut-off device. Inclined positionning of the rotor.

Optional equipment

Tubular rotor. Water and emulsion spray system with electronic control and digital display. Special paint.







Technical data according to CECE
All specifications are subject to change without notice or obligation

000027

SOIL STABILIZER ASPHALTRECYCLER

RACO 550

Machine including optional equipment

High engine performance with optimum air filter cleaner

4-wheel drive and 4-wheel steering

Working possibility in both directions

Great maniability

Rotor doors hydraulically adjustable

Rotor revolution adjustable and infinitely variable

Operating depth max. 520 mm

High performance through an electronic regulation system

Rapidly exchangeable spades and point teeth

Conversion into recycler only by exchange of tools or by changing the rotor

Low repair costs

Rotor and mixer chamber made of abrasion proof special steel

Rotor drive by 2 hydrostatic motors, disconnectable

Cutting angle automatically adjustable independently of soil irregularity

Adjustable cutting angle independent of machine position

Spring suspended double driving stand

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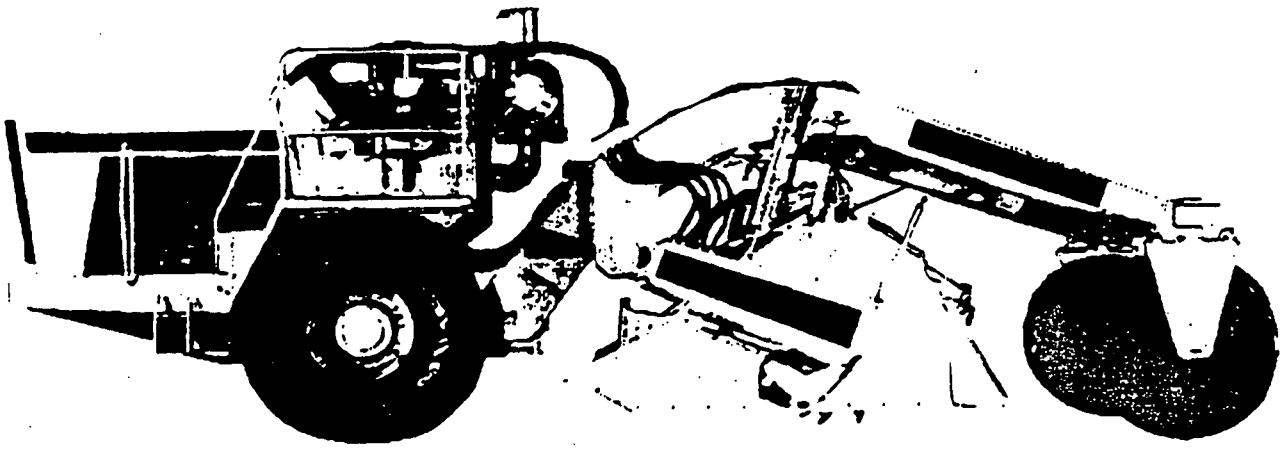
SOIL STABILIZER
ASPHALT RECYCLER

RACO 250



Machine including optional equipment

- High engine performance with Farr heavy duty air filter
- Rear wheel steering
- Oscillating articulated frame
- Rear tires with adjustable track
- Rotor depth control
- Rotor drive by 2 hydrostatic motors
- Rotor and mixer chamber made of abrasion proof special steel
- Mixer chamber rear door hydraulically adjustable
- Infinitely variable rotor speed
- Operating depth max. 20 inch (500 mm)
- Easy and quick change of teeth and points
- Low repair costs
- Three braking systems
- Conversion into asphalt recycler only by change of tools

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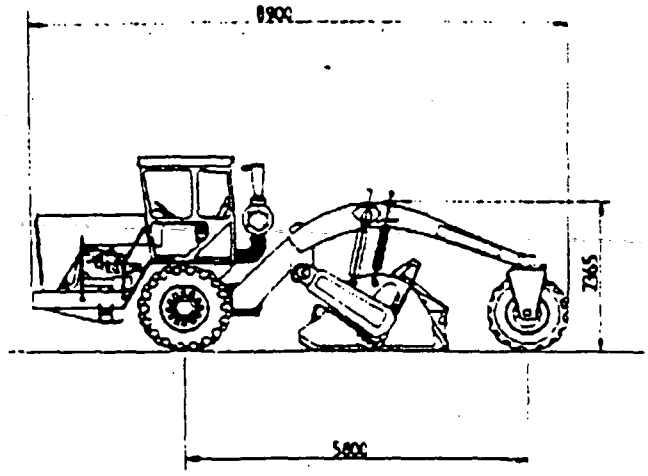
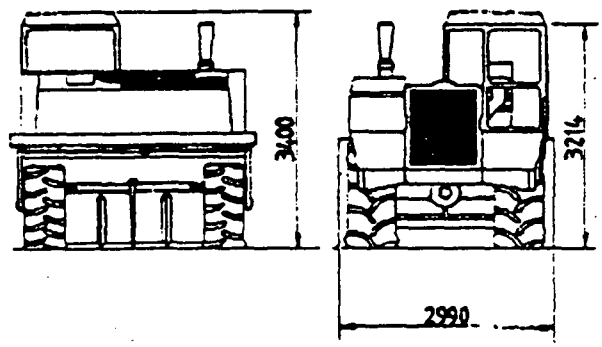
Technical data		RACO 250
Weights		
Operating weight with cab	42550 lbs	19300 kg
Operating weight without cab	41460 lbs	18800 kg
Dimensions		
Total length	29'2"	8900 mm
Total width	9'10"	2990 mm
Height with cab	11'15"	3400 mm
	Articulated	All-wheel
Turning radius inside	22'11"	10'6"
Turning radius outside	32'10"	20'4"
Engine		
MWM-Deutz Diesel 4-stroke water-cooled, 8 cylinders		Type TBD 234 V8 Turbo
Performance to DIN 6271		339 kW/461 HP at 2000 rpm
Performance to SAE J 1349		354 kW/475 HP at 2000 rpm
Air filter		FARR
Fuel tank		211 gal
Drive		
Hydrostatic drive, infinitely variable, electrically controlled, 2 speed transmission, planetary shaft with disc brakes and differential lock		
Speed		
	low	high
1st gear	mph 0-2.5	km/h 0-4.3
2nd gear	mph 0-6.2	km/h 0-11.8
Rotor		
Hydrostatic drive, infinitely variable, electrically controlled		
Working width	stabilization 94.5" (2400 mm)	recycling 94.5" (2400 mm)
Working depth	16.5" (420 mm)	16.5" (420 mm)
Diameter	53.2" (1350 mm)	53.2" (1350 mm)
Number of spade teeth	84	—
Number of point teeth	32	140
Revolutions, inf. variable	rpm 0-155	0-155
Steering		
Articulated frame ±30°, oscillating angle ±15° Hydrostatic servosteering and rear wheel steering		
Brakes		
Service brake: hydrostatic Pedal brake: hydrostatic oil cooled disc brakes Parking brake: mechanical disc brake		
Tires		
Front		750/65 R 26XM27TL
Rear		19.5 LR 24XM27
Electrical system		
Operating voltage 24 V, 2 batteries of 180 Ah each		
Standard equipment		
Rotor for stabilization or asphalt recycling. Operator's stand with hydraulically suspended seat. Complete instrument panel including hour meter, emergency-stop button. Back-up alarm. Security switch for rotor stop. Rotor and mixer chamber made of abrasion proof special steel. Mixer chamber rear door hydraulically adjustable. Mechanical rotor depth control. Rapidly exchangeable teeth and points. Automatic engine shut-off device.		
Optional equipment		
Commercial cab, sound insulation, heating, airconditioning, inside and outside mirror. Rotor for working depth of 20 inch (500 mm). Different sizes of rotor width. Electrical Diesel filling. Electric rotor depth control with digital display. Working lights at front and rear. ROPS. Vandalism protection. Mixer chamber door front hydraulically adjustable. Water and emulsion spray system with electronic control and digital display. 4-wheel drive assistance. Special paint.		

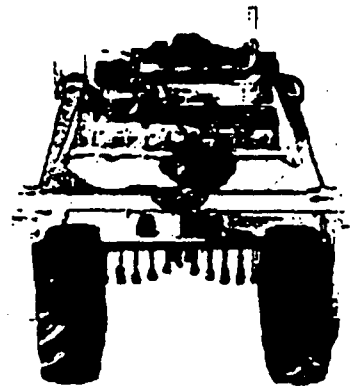
R4.0 250 01 SD V31

Description:
Soil stabilizer / Asphalt recycler

RACO 250







All specifications are subject to change without notice or obligation

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1702	(2)S/C NO.: FSC- 597	(5)Pg 1 OF 1	(6)DATE 21 July 97
(3)S/C TITLE: OSDF Phase 1 Construction			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	(4A)RCI/DCN TITLE: Rock Fragment Size		(11)DCN NO.: 1702-019

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Specification 20100-TS-0002 Section 02200	Parts2.01.B& 3.08.B.	0	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☐DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Civil Review Only

Change Specification Section, Section 02200, Part 2.01. B by replacing the second sentence with " Do not allow rock fragments larger than 5 inches for nominal 8 inch loose lifts and 3 inches for nominal 4 inch lifts. "

Rewrite Specification Section, 02200, Part 3.08.D as follows:

Remove rock particles with a maximum dimension larger than 5 inches for loose lifts with a thickness of 8±1 inches. For loose lifts of 4±1 inches the maximum rock particle size shall be 3 inches, unless otherwise directed to be smaller by the Construction Manager

(10)REQUESTOR: Daniel Boling	COMPANY: GeoSyntec	(12)FCE / PE	DATE: 7/22/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☒YES

(14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Daniel Boling	DATE: 21 July 97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:	
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY)			DATE: 7/22/97
PERFORMANCE GRADE: (17) 5			
(18)CONSTRUCTION CONCURRENCE:	DATE: 07/24/97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☐YES ☒NO (19)			

FS-F-4259 (10/01/96)

ORIGINAL

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REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.:	(2)S/C NO.:	(5)Pg	(6)DATE
1702	597	OF 4 2 1 X	7/24/97

(3)S/C TITLE: OSOF PHASE I

(11)RCI NO.:

(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☒ OTHER☐

(4A)RCI/DCN TITLE: ENGINEERING DESIGN CHANGES INCORPORATED IN SUB CONTRACT AMENDMENTS

(11)DCN NO.: 1702 - 021

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
SEE ATTACHMENT A, pages 2 and 3			

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☐ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

THIS DCN INCORPORATES ENGINEERING DESIGN CHANGES IN SUBCONTRACT AMENDMENTS NO. 1 THROUGH 4 (COPIES ATTACHED) DURING THE BID PERIOD.

SEE ATTACHMENT A FOR THE LIST OF ENGINEERING DESIGN CHANGE ITEMS AND DCN JUSIFICATIONS. ITEM NUMBERS LISTED IN TABLE HAVE BEEN CIRCLED ON ATTACHED AMENDMENTS.

(10)REQUESTOR: COMPANY: FDF DATE: 8/6/97

Dan Goetz for Dan Bodine

(12)FCE / PE DATE: 7/24/97 8/6/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☒ YES

(14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

Corrections to Attachment A are noted. Also Amendment 1, ~~on~~ Item 6 should have page numbers corrected (Total of 4) and page 1 "Rev. 1" and date "November 7, 1996" added at bottom. Contract changes resulting from responses to questions, except Amendment 4 question 92, or other changes to contract parts not specifically identified in Attachment A are not part of this DCN.

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: DATE:

Daniel Bodine 5 Aug 97

(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE

PERFORMANCE GRADE: (17) 4

8/6/97

(18)CONSTRUCTION CONCURRENCE: DATE: 8/8/97

PURCHASE REQUISITION REQUIRED: ☐ YES ☒ NO (19)

(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

FS F 4259 (10/01/96)

ORIGINAL

Attachment A to DCN 1702-021
S/C no. 597
WP / WO No. 1702
Date 7/24/97

Amendment #	Item #	Documents Affected	Engineering Design Change Item	DCN Justification
1	6	List of drawings and specifications	Revise list of drawings and specifications	Change revision numbers on list.
1	7 RbB	Reference Dwg. 75A-~~5900~~ 5500 mc 8/11/97 G-00439, Rev 0 Reference Dwg. 75A-~~5900~~ 5500 mc 8/11/97 G-00440, Rev 1	Add Reference Drawings: Site Plan 1 of 3 Site Plan 2 of 3	Added reference drawings missing from CFC package
1	9 RbB	Sheet 1 G-2A, DWG, 90X-6000-G-00072 Rev. 0 Sheet 1 G-5C, DWG, 90X-6000-G-00075 Rev 0 Sheet 1 G-~~00A~~ 24A DWG, 90X-6000-G-00082 Rev 2 Specification 02100	Grid Location Sed. Basin Fence and Grid Location Future Cell 2 Permanent Bench Marks & revise articles	Clarified notes on drawings
2	12 RbB	All 90X-6000-Series DWG Nos. All Sheets ~~Drawing~~ G-5A, Rev. 0 G-00073 ~~Drawing~~ G-5B, Rev. 0 G-00074 ~~Drawing~~ G-15A, Rev. 0 G-00077 ~~Drawing~~ G-22A, Rev. 0 G-00080 ~~Drawing~~ G-23A, Rev. 0 G-00081	Replace with Rev. 1 Replace with Rev. X2 Rev. 1 was never released Replace with Rev. X2 Replace with Rev. 1 Replace with Rev. X2	Added latest revisions to Bid Package
2	13	Specification 02770	Change Table 02770-1	Changed Specification in response to bidders' concerns raised during pre-bid meeting.
3	14 B	Specification 02772	Change Typographical Error	
4	4	Specification 02230	Road Subbase Specification	Clarified Specification of Subbase Materials
4	5	Specification 02770	Geomembrane Liner	Modified Tensile Yield Test requirements

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4	6	Specification 02772	Geosynthetic Clay Liner	Clarified Specifications
4	7	Specification 02772	Geosynthetic Clay Liner	Change to GCL Tensile Resistance Specification in response to bidders' concerns raised during pre-bid meeting.
4	8	Specification 02772	Geosynthetic Clay Liner	Change Frequency of Manufacturer's QC Testing in response to bidders' concerns raised during pre-bid meeting.
4	9	Specification 02772	Geosynthetic Clay Liner	Remove Geotextile Specifications
4	10 Q68	Sheet ~~Drawing~~ G5C DWG 90X-6000-6-00075 Rev. 0	Subgrade Grading Plan	Move Sedimentation Basin away from Controlled Area
4	Question 12	Sheet ~~Drawing~~ 15A DWG 90X-6000-6-00079 Rev. 2	Protective layer thickness	Correct mislabeled thickness.

AMENDMENT OF SOLICITATION/MODIFICATION OF SUBCONTRACT

1. AMENDMENT/MODIFICATION NO.	2. EFFECTIVE DATE	3.
ONE (1)	NOVEMBER 7, 1996	PAGE 1 OF 2

4. ISSUED BY: Fernald Environmental Restoration Management Corporation
P.O. Box 538704
Cincinnati, OH 45253-8704

5. NAME AND ADDRESS OF SUBCONTRACTOR (*Name, street, county, state, and zip code*)	6. AMENDMENT OF SOLICITATION NO.	DATE
PROSPECTIVE OFFERORS	F97P272290	11/7/96
	7. MODIFICATION OF SUBCONTRACT NO.	DATE

8. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 10. The hour and date specified for receipt of Offers ☐ is extended ■ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:

(a) By completing Items 5 and 11, and returning ONE (1) copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate [ ] letter [ ] telegram [ ] facsimile which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by [ ] telegram or [ ] letter or [ ] facsimile, provided each makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

9. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF SUBCONTRACTS/ORDERS. IT MODIFIES THE SUBCONTRACT/ORDER NO. AS DESCRIBED IN ITEM 10.

A. THIS UNILATERAL MODIFICATION IS ISSUED PURSUANT TO: (*Specify authority*). THE CHANGES SET FORTH IN ITEM 10 ARE MADE IN THE SUBCONTRACT IDENTIFIED IN ITEM 7.

B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES SET FORTH IN ITEM 10.

C. THIS BILATERAL MODIFICATION IS ENTERED INTO PURSUANT TO AUTHORITY OF:

D. OTHER (*Specify type of modification and authority*)

E. IMPORTANT: CONTRACTOR ☐ is not. ☐ is required to sign this document and return copies to the issuing office.

10. DESCRIPTION OF AMENDMENT/MODIFICATION

REFER TO THE ATTACHED PAGES FOR COMPLETE DETAILS OF THE ADMENDMENT NO. 1

Except as provided herein, all terms and conditions of the document 6 or 7, remain unchanged and in full force and effect.

11A. NAME AND TITLE OF SIGNER (*Type or print*)		12A. Fernald Environmental Restoration Management Corp. A. D. Sablosky Contract Administrator	
11B. SUBCONTRACTOR/OFFEROR (*Signature of person authorized to sign*)	11C. DATE SIGNED	12B. (*Signature*)	12C. DATE SIGNED 11/07/96

FSC 597

ON-SITE DISPOSAL FACILITY - PHASE I

Amendment Number 1

November 7, 1996

1. Reference Part 4 - Special Terms and Conditions for Construction - Attachment No. 1, Davis Bacon Wage Decision No 960034, Modification No. 7, and Replace in its entirety with Davis Bacon Wage Decision No. OH960034 Modification No 8, Dated October 18, 1996.

2. Reference Part 6 - Statement of Work, Rev. 0 dated October 21, 1996, replace in its entirety with the attached Rev. 1 dated November 7, 1996. .

3. Reference Part 6 - Statement of Work - Exhibit A - Subcontract Schedule, Rev. 0 dated October 21, 1996, replace in its entirety with the attached Rev. 1 dated November 7, 1996.

4. Reference Part 6 - Statement of Work - Exhibit B - Pay Item Descriptions, Rev. B dated October 21, 1996, replace in its entirety with the attached Rev. 1 dated November 7, 1996.

5. Reference Part 6 - Statement of Work - Exhibit F - Construction Subcontractor Termination Checklist, omitted from original proposal package. Insert the attached.

6. Reference Part 7 - Technical Drawings & Specifications, Pages 1 of 4 through 4 of 4, Rev.0 dated October 21, 1996, replace in its entirety with Pages 1 of 4 through 4 of 4, Rev. 1 dated November 7, 1996.

7. Reference Part 7 - Technical Drawings & Specifications, Rev.0 dated October 21, 1996, section 3.0.A Reference Drawings. Add the attached drawings 75A~~-5900-~~G-00439, Site Plan, 1 of 3, Rev. 0, and 75A~~-5900-~~G-00440, Site Plan, 2 of 3, Rev. 1.

8. Reference Part 7 - Technical Drawings & Specifications, add the attached information (fly ash spec, ... drawings, etc.

9. Reference Part 7 - Technical Drawings & Specifications, Section 1.0 - Construction Drawings. The following are additions/deletions to be incorporated in the referenced drawings:

The following is a general summary of the changes on the revised drawings or sections that are part of this Amendment.

	Drawing #	Rev.	Description
1)	90X-6000-G-00072	0	Grid Location. B-5: Relocate "Construction Administration Area (Note 12)"Shadow from drawing 90X-6000-G-0072, Rev. 0, Grid Location B-5 to Grid Location C-5 (Approximately N-479,200; E-1, 350, 400). Add Note stating that Benchmarks OSDF-1, OSDF-2 and OSDF-3 shown on Benchmarks Table shall be installed by others.
2)	90X-6000-G-00075	0	Show utilization of existing fence along the west perimeter of OSDF Phase I Project. Move west boundary of "Sedimentation Basin" on drawing 90X-6000-G-00075, Rev. 0., grid location D-2, to the east 25' feet to permit usage of existing fence line.
3)	90X-6000-G-00075	0	Grid Location A-1. Delete Shadowed Coordinate N-482,000;
4)	90X-6000-G-00082	0	Change "Future Cell 3" to read "Future Cell" in the second sentence of Note 2.
5)	Section 02100 - Surveying		a. In article 1.01. A. 1; Delete 'and permanent benchmarks' b. Delete Article 3.04.

PART 7 - TECHNICAL DRAWINGS AND SPECIFICATION

PART 7 _

TECHNICAL DRAWINGS AND SPECIFICATIONS
SUBCONTRACT NUMBER FSC 597
ON-SITE DISPOSAL FACILITY

1.0 CONSTRUCTION DRAWINGS

The following drawings show work to be performed on this Subcontract:

Title	Sheet No.	Rev. No.	FERMCO Drawing No.	
General				
Title Sheet	X 1A	0	90X-6000-X-00070	
Legend and Symbols	X 2B	0	90X-6000-X-00071	
Civil				
Site Development Plan	G-2A	0	90X-6000-G-00072	
Subgrade Grading Plan I	G-5A	1	90X-6000-G-00073	Am #2
Subgrade Grading Plan II	G-5B	2	90X-6000-G-00074	Am #2
Subgrade Grading Plan III	G-5C	0	90X-6000-G-00075	
Cell Outlet Grading Plans	G-9A	0	90X-6000-G-00076	
OSDF Sections	G-15A	2	90X-6000-G-00077	Am #2
Cell Perimeter Details I	G-20A	0	90X-6000-G-00078	
Cell Perimeter Details II	G-21A	0	90X-6000-G-00079	
Liner System Details I	G-22A	1	90X-6000-G-00080	Am #2
Liner System Details II	G-23A	2	90X-6000-G-00081	Am #2
Liner System Details III	G-24A	0	90X-6000-G-00082	
Liner System Details IV	G-25A	0	90X-6000-G-00083	
Stormwater Management System Details I	G-30A	0	90X-6000-G-00084	
Stormwater Management System Details II	G-31A	0	90X-6000-G-00085	
Equipment Decontamination Facility Details I	G-37A	0	90X-6000-G-00086	
Equipment Decontamination Facility Details II	G-37B	0	90X-6000-G-00090	
Horizontal Monitoring Well Misc. Details	G-40A	0	90X-6000-G-00087	
Sedimentation Basin Details	G-41A	0	90X-6000-G-00089	
Structural				
Chain Link Fence	S-5A	0	90X-6000-S-00088	

2.0 SPECIFICATIONS

A. Technical Specifications

The following specifications specify work to be performed on this Subcontract:

DIVISION 2: SITE WORK

Section 02100	-	Surveying
Section 02110	-	Clearing, Grubbing, and Stripping
Section 02200	-	Earthwork
Section 02215	-	Trenching and Backfilling
Section 02225	-	Compacted clay Liner
Section 02230	-	Road Construction
Section 02240	-	Protective Layer
Section 02270	-	Erosion and Sediment Control
Section 02271	-	Riprap
Section 02605	-	High Density Polyethylene (HDPE) Manholes, Pipes, and Fittings
Section 02710	-	Granular Drainage Material
Section 02714	-	Geotextiles
Section 02721	-	Culverts
Section 02770	-	Geomembrane Liner
Section 02772	-	Geosynthetic Clay Liner
Section 02831	-	Chain-Link Fences and Gates
Section 02930	-	Vegetation

DIVISION 3: CONCRETE

Section 03100	-	Concrete

DIVISION 13: SPECIAL CONSTRUCTION

Section 13000	-	Equipment Decontamination Facility
Section 13005	-	Liner Penetration Boxes
Section 13010	-	Impacted Material Placement

4 ROB Aug 4, 1997

B. Work Plans

Surface-Water Management and Erosion Control Plan, Rev. G, October 1996 (DRAFT)

Impacted Material Placement Plan, Rev. G., October 1996 (DRAFT)

Systems Plan, Rev. G., October 1996 (DRAFT)

C. Construction Technical Specifications

The following are Construction Technical Specifications referenced in other subcontract sections.

Title	Date
Subcontract Submittal Requirements	10/21/96
Subcontractor Safe Work Plan Format Requirements	10/21/96
Subcontractor Fire Extinguisher Inspection	10/21/96
Subcontractor Ladder Inspection	10/21/96
Subcontractor Portable Structures	10/21/96

3.0 REFERENCE INFORMATION

The following is reference information showing data relative to this Subcontract for use by the subcontractor:

A. Reference Drawings

Title	Sheet No.	Rev. No.	FERMCO Drawing No.
Facility Plot Plan	X-3	G	90X-6000-X-00003
Site Plan	X-4	G	90X-6000-X-00004
Brown Till/Gray Till Interface Contour Map	X-10	G	90X-6000-X-00009
Gray Till Isopach Map	X-11	G	90X-6000-X-00010
Surface Geology Map	X-12	G	90X-6000-X-00011
Geologic Section A-A	X-13	G	90X-6000-X-00012

NOTE: THERE IS NO PAGE 5 ISSUED WITH AM-1 AND 4 PGS AUG 4, 1997

000041

AMENDMENT OF SOLICITATION/MODIFICATION OF SUBCONTRACT

1. AMENDMENT/MODIFICATION NO.	2. EFFECTIVE DATE	3.
TWO (2)	NOVEMBER 22, 1996	PAGE 1 OF 16

4. ISSUED BY: Fluor Daniel Fernald
P.O. Box 538704
Cincinnati, OH 45253-8704

5. NAME AND ADDRESS OF SUBCONTRACTOR (*Name, street, county, state, and zip code*)	6. AMENDMENT OF SOLICITATION NO.	DATE
PROSPECTIVE OFFERORS	F97P272290	11/22/96
	7. MODIFICATION OF SUBCONTRACT NO.	DATE

8. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☒ The above numbered solicitation is amended as set forth in Item 10. The hour and date specified for receipt of Offers ☒ is extended ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:

(a) By completing Items 5 and 11, and returning ONE (1) copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate [ ] letter [ ] telegram [ ] facsimile which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made [ ] telegram or [ ] letter or [ ] facsimile, provided each makes reference to the solicitation and this amendment, and is received prior to the opening hour d date specified.

9. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF SUBCONTRACTS/ORDERS. IT MODIFIES THE SUBCONTRACT/ORDER NO. AS DESCRIBED IN ITEM 10.

A. THIS UNILATERAL MODIFICATION IS ISSUED PURSUANT TO: (*Specify authority*). THE CHANGES SET FORTH IN ITEM 10 ARE MADE IN THE SUBCONTRACT IDENTIFIED IN ITEM 7.

B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES SET FORTH IN ITEM 10.

C. THIS BILATERAL MODIFICATION IS ENTERED INTO PURSUANT TO AUTHORITY OF:

D. OTHER (*Specify type of modification and authority*)

E. IMPORTANT: CONTRACTOR ☐ is not. ☐ is required to sign this document and return copies to the issuing office.

10. DESCRIPTION OF AMENDMENT/MODIFICATION

REFER TO THE ATTACHED PAGES FOR COMPLETE DETAILS OF THE ADMENDMENT NO. 2

Except as provided herein, all terms and conditions of the document 6 or 7, remain unchanged and in full force and effect.

11A. NAME AND TITLE OF SIGNER (*Type or print*)		12A. Fernald Environmental Restoration Management Corp.
		A. D. Sablosky Contract Administrator
11B. SUBCONTRACTOR/OFFEROR (*Signature of person authorized to sign*)	11C. DATE SIGNED	12B. (*Signature*)
		12C. DATE SIGNED 11/22/96

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SOLICITATION NO. F97P272290

SUBCONTRACT NO. FSC 597

ON SITE DISPOSAL FACILITY (OSDF) PHASE I

AMENDMENT NO. 2

November 22, 1996

1. Refer to Part 1, Offer Section, Section 1, Form FS-F-798, "Solicitation, Offer, and Award", Item 13, and delete reference to quantity of offers. Refer to Instruction to Offerors for instructions regarding quantity and organization of offers; change proposal due date to December 12, 1996.

2. Refer to Part 1, Offer Section, and add Form FS-F-4625, Agreement to Subcontract Terms and Conditions / General Provisions, dated 4/23/96.

3. Refer to Part 1, Offer Section, Section 2, Form FS-F-4107 M52B, Representations, Certifications, and Other Statements of Bidders / Offerors, dated 7/19/95 and:
   - Refer to Page 3 and delete Item 11, "Organization Conflict of Interest - Disclosure or Representation" in its entirety.
   - Refer to Page 4 and delete Item 12, "Walsh-Healey Public Contracts Act Representation in its entirety.

4. Refer to Part 1, Offer Section, Section 4, "Instructions to Offerors", dated October 24, 1996 and replace with "Instructions to Offerors," attached. Changes are highlighted.

5. Refer to Part 4, Special Terms and Conditions for Construction OSDF Phase 1, ERRATA Sheet dated October 24, 1996 and replace with Special Terms and Conditions for Construction OSDF Phase 1, ERRATA Sheet dated November 20, 1996.

6. Refer to Part 5, Project Labor Agreement, Section 4, FERMCO Memorandum No. M:ADM:(IR):94-0198 dated May 24, 1994 and include page 1 of 2 which was previously omitted.

7. Refer to Part 6, Statement of Work, Section 2.13 Contract Line Item 2, and replace with the following in its entirity:

"2.13 CONTRACT LINE ITEM 2

A. Contract Line Item 2 shall include cost for performing excavation, stockpile, haul and clay fill (herein after called additional excavation and clay fill) of an estimated not to exceed 5,000 in-place cubic yards (ICY) which is in addition to the scope of work specified or shown on the construction drawings. This cost shall be included in the base subcontract proposal price which will be listed as a per unit price pay

item on the Pay Item Descriptions. This excavation and clay fill shall be performed as directed by the Construction Manager.

B. Payment for this estimated not to exceed excavation and clay fill shall be based on the Unit Price set forth in the Solicitation, Offer and Award Form (FS-F-798). This unit price for estimated excavation and clay fill per in-place cubic yard includes but is not limited to labor, equipment, material, supervision, safety, quality control, submittals, taxes, insurance, bond, overhead and profit.

C. The Subcontractor shall include, as part of the monthly invoice, the in-place cubic yards (ICY) of the additional excavation and clay fill during that billing period established by field surveys. Copies of the field surveys shall be included with the invoice. The billing shall be against contract line item 2 in the Pay Item Schedule."

8. Refer to Part 6, Statement of Work, Section 2.14.H.1 add the following :

"Response time is limited to 30 minutes to the site and 30 minutes after leaving the site."

9. Refer to Part 6 , Statement of Work, Exhibit A - Construction Schedule, Rev. 1 dated November 7, 1996, replace in its entirety with Rev. 2, dated November 22, 1996.

10. Refer to Part 6, Statement of Work, Exhibit B - Pay Item Descriptions, Pay Item 7.0, Pay Item Heading "Cell 1 and intercell berm LINER". Delete the Detailed Pay Item Description in its entirety and replace with:

"Items under this Pay Item include the liner for Cell 1 and the liner for the intercell berm between Cell 1 & 2 including the tie-in of the various layers of Cell 1 and the intercell berm between Cell 1 & 2 to the limits shown on the Construction Drawings."

11. Refer to Part 6, Statement of Work, Exhibit E, Documentation Requirements Form, delete in its entirety and replace with Rev. 1, dated November 22, 1996.

12. Refer to Part 7, Technical Specifications & Drawings, Construction Drawings, and replace:

Title	Sheet	Rev.
Subgrade Grading Plan I	G-5A	Rev. 0
Subgrade Grading Plan II	G-5B	Rev. 0
OSDF Sections	G-15A	Rev. 0

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Liner System Details I	G-22A	Rev. 0
Liner System Details II	G-23A	Rev. 0

With the following drawings:

Title	Sheet	Rev.
Subgrade Grading Plan I	G-5A	Rev. 1
Subgrade Grading Plan II	G-5B	Rev. 2
OSDF Sections	G-15A	Rev. 2
Liner System Details I	G-22A	Rev. 1
Liner System Details II	G-23A	Rev. 2

13. Refer to Part 7, Technical Specifications, Specification Section 02770, Table 02770-1, Mechanical Properties, Tensile Properties (each Direction):

1) Change the specified value for Force Per Unit Width at Yield to a minimum of 160 lb/in per ASTM D 638.

2) Change the specified value for Tensile Strength (force per unit width at break) to a minimum of 100 lb/in per ASTM D 638.

14. Refer to Part 7, Technical Drawings and Specifications, Section 2.0.C - Construction Technical Specifications:

Subcontractor Fire Extinguisher Inspection Procedure, Rev. 0, dated October 21, 1996, delete Attachments A and B in their entirety, replace with Attachments A and B, dated November 22, 1996;

Subcontractor Ladder Inspection, dated October 21, 1996, delete Attachments A and B in their entirety, replace with Attachments A and B, dated November 22, 1996;

Subcontractor Portable Structures, add Attachments 1 through 4 which are referenced in this Construction Technical Specification but were not included in the proposal package.

15. Refer to Part 8, Safety & Health and Training Requirements:

Table of Contents, Page 4, Section E - Attachments, change the description of Attachment 1 to read "Deleted";

Section 2.0 General Safety and Health Provisions, delete subparagraph 2.3 in its entirety;

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Item Descriptions in Exhibit B of Part 6, Statement of Work.

Response: The Pay Item Schedule referenced in Part 1, Instructions to Offers, 10.0 Price Proposal, B was not provided in the solicitation. The requirement is for the Offeror to generate a Pay Item Schedule similar to the Pay Item Descriptions in Exhibit B of Part 6, Statement of Work. A form is provided for the convenience of the Offeror with this Amendment No. 2.

7. Question: Reference Part 1, Instructions of Offerors, 10.0 Price Proposal, Items A.2 and B: Please verify that Contract Line Item 2, 5,000 cubic yards of excavation, is not included in the Pay Item Descriptions of Exhibit to Part 6, Scope of Work, and, therefore, is not to be included in the Pay Item Schedule to be generated by the Offeror.

Response: Refer to Amendment No. 1 dated November 7, 1996 for a revised Exhibit B and the description of Contract Line Item 2. The Pay Item Descriptions illustrate the minimum activities that must be included in a Pay Item Schedule and Pay Item Schedule Invoice. The Subcontractor may include items additional to those listed.

8. Question: Refer to Reference Part 6, Statement of Work 2.13 Contract Line Item 2: provides for additional payment for 5,000 cubic yards of additional excavation and fill on a unit price basis. However, the contract does not contain a variation in quantity clause. Therefore, it is arguable that amounts above 5,000 cubic yards could be subject to modification or a claim under this contract. The Special Conditions also limit the amount of overhead and profit that can be applied to modifications. Please clarify how payment for any required quantities above bid stated quantities will be made under the contract.

Response: Amendment 2, Part 6, Statement of Work, Paragraph 2.13 for clarification. Contract Line Item 2 is a per unit price for an estimated 5,000 cubic yards of excavation and backfill below the design subgrade. This estimated amount is a not to exceed amount; there is no representation that this amount or any amount of excavation and backfill below the design subgrade will be necessary, simply that it is anticipated. Hence, a variation in quantity clause would not be appropriate to this application. Amounts above 5,000 cubic yards would constitute a change order; an equitable adjustment for the changed work would be executed in accordance with the applicable General Provisions and Special Terms and Conditions.

9. Question: Reference Part 6, Statement of Work, 2.14 Dust Control: requires after hours dust suppression and appears to limit the amount payable to $50,000. Please clarify whether or not this $50,000 is, in fact, intended as a cap on the total amount payable or whether it will be modified upward in the event of greater than expected requirements for the activity. What exactly is the $50,000 dust suppression allowance intended to cover? What happens when the offeror over/underruns this amount?

Response: This dust suppression allowance is to cover the expense of bringing someone to the project site to suppress dust when unusual circumstance (IE. High wind and excessive dry heat) cause a previously secure soil surface to generate dust. In the event that after hours dust suppression exceeds $50,000 the contract will be modified in accordance with the applicable General Provisions and Special Terms and Conditions. Refer to Amendment 1, Part 6, Statement of Work, for a further explanation regarding what the dust suppression allowance is intended to cover.

10. Question: The solicitation contains option items which will be evaluated in determining the lowest total evaluated price. In this regard, the evaluation criteria indicate that either option 2 (a) or 2 (b) will be selected depending on which is the most "advantageous" to the government. The evaluation criteria do not indicate how this advantage will be determined by Fluor Daniel Fernald. It is likewise not clear whether all offerors who submit will be evaluated using the same combination of options 2 (a) or 2 (b). Please clarify whether or not all offerors will be evaluated based on the same selection of options 2 (a) or 2 (b), of whether or not different combinations of options will be applied to different contractors.

Response: All offerors will be evaluated based upon the same combination of either Option 2A or 2B.

11. Question: Reference Part 6, Statement of Work, Exhibit B, Pay Item Description, 4.01, Leachate Conveyance System: the operation and maintenance of the Leachate Conveyance System is required by Part 1, Instruction to Offerors, 10.0 B, to be priced for the contract period. Please clarify how the price should be presented; i.e., for the base contract period or should any extension be considered through potential options which extend the contract period.

Response: Refer to Amendment 2, Part 6, Statement of Work, for amended project schedule. All costs associated with schedule extension that is not part of the specific scope of work of Option 1 or Option 3 will be included in the proposed cost for Option 2a and Option 2b. Option 1 does not have any schedule extension related to it.

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Section E - Attachments, delete Attachment 1 in its entirety.

15. Refer to Part 9, Quality Assurance Requirements, Quality Requirements, Paragraph 2.3 on Page 2 of 5, and change Paragraph 2.3 to read:

"Describe the qualifications of the Subcontractor's Quality Inspector."

The following clarifications have been requested:

1. Question: Reference Part 1, Instruction to Offerors, 9.0 Technical Proposal, page 8 of 16, Section 2, Technical Approach and Schedule: Please clarify and expand upon the requested information/content of the offeror's technical approach.

   Response: The format to be utilized is for the Preliminary Safe Work Plan is included in the Subcontractor Safe Work Plan Format Requirements located in Part 7 (Volume II) of the Solicitation .

2. Question: Reference Part 1, Subcontracting Plan: A SB/D Subcontracting Plan is required for this contract, but no minimum SB/D requirement is identified. Please verify that no minimum goals are expected and that the SB/D Subcontracting Plan is not part of the award evaluation.

   Response: There are no specified minimum goals. Rather the Subcontracting Plan must reflect a reasonable and good faith effort to subcontract to small businesses, small disadvantaged business, and small women owned businesses. The Subcontracting Plan will be reviewed for sufficiency but will not be competitively evaluated. Failure to provide a sufficient Subcontract Plan may be grounds for a determination of non-responsiveness.

3. Question: Reference Part 1, Instructions to Offerors, 9.0 Techni
   8 of 16, C. Project Team Roles and Responsibilities
   "specify all significant lower tier subcontractors h
   Typically, agreements are not finalized with lo
   until after project award. Further, this con
   qualified bidders an opportunity to bi
   subcontractor work after project award. W
   changes to our named lower tier subcor

   Response: See Amendment 2 Part 1, Instructic ...fferors

Terms and Conditions Errata Sheet for clarification.

4. Question: Reference Part 3, General Terms and Conditions, clause a.32, Indemnity: requires the subcontractor to broadly indemnify Fluor Daniel Fernald, FERMCO, and the government regardless of the comparative negligence of Fluor Daniel Fernald, FERMCO or government employees or others. This is an extremely one-sided indemnity. It is also noted that in accordance with the Statement of Work at page 2 of 18, the construction site for this activity will have a public road running through it, which will continue to remain open to traffic during a substantial portion of the construction period. This certainly increases the risk of accidents which could trigger this broad liability. Page 10 of 18 of the Statement of Work also states that Fluor Daniel Fernald will be responsible for all monitoring on the project. Given the fact that the subcontractor will not have complete control of the project, would Fluor Daniel Fernald consider negotiating an indemnity which would be fairer with the subcontractor?

Response: Fluor Daniel Fernald will not consider negotiating this clause.

5. Question: Reference Part 4, Special Terms of Conditions, SC-29, Performance of Work by the Subcontractor: requires subcontractor to perform 55 percent of the work at the site. Please clarify how this determination will be made. If the determination is made on a project revenue basis, how will the purchase of materials and rental of equipment be considered? If the subcontractor is directly overseeing the labor of others (i.e., often equipment suppliers can provide equipment operators), how will this be considered? If site activities are supervised and managed by the subcontractor, what would be the requirement for work to be considered performed by others?

Response: Performance of work by the Subcontractor will be calculated and tracked by on a total cost basis. Purchases of material and rental of equipment will be "credited" to that tier of Subcontractor which executes the direct purchase or rental. If operators are supplied with rented equipment, the Subcontractor will be "credited" that dollar amount only if the rental agreement is a unit price agreement for equipment and there is no scope of work included in the rental agreement. The Subcontract shall provide documentation of this relationship upon request.

6. Question: Reference Part 1, Instructions to Offerors, 10.0 Price Proposal, B: Please verify that Pay Item Schedule was not provided in the solicitation and that the Offeror must generate a Pay Item Schedule similar to the Pay

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12. Question: Fluor Daniel Fernald is not required to exercise any of the options until October 15, 1997, in accordance with the special condition clause added by an errata sheet. Please clarify whether or not the exercise of these options is dependent upon funding or what other future events.

Response: Fluor Daniel Fernald is not required to exercise any options. If Fluor Daniel Fernald executes any individual or group of options, it will do so on or before October 15, 1997. Exercise of options is at the sole discretion of Fluor Daniel Fernald and will be exercised only if it is in the best interests of the Department of Energy and Fluor Daniel Fernald, funding and other factors being considered.

13. Question: Will Fluor Daniel Fernald provide Offerors with quantity take-offs as determined by their Engineer?

Response: No.

14. Question: Reference Part 6, Statement of Work, 4.0 Interfaces and Restraints, 4.1: Please clarify the extent of escorting required for deliveries to the project work site.

Response: Drivers delivering materials to the work site will not be required to complete training as defined in Part 8 provided a trained subcontractor escort is maintained at all times. Drivers without proper training will not enter any Radiological controlled area.

Drivers exiting their vehicles will wear the following safety equipment:

- Safety glasses with rigid shields or goggles (safety glasses ANSI Z87.1 listed)
- Hard hat (only ANSI Z89.1 listed)
- Sturdy leather work boots
- Brightly colored safety vest
- Any additional PPE as required by escort

Escorts will brief drivers of any hazards around a delivery vehicle.

15. Question: Will alternate work schedules be permitted, i.e., four days of 10 hours a day, scheduled overtime, scheduled weekends, etc.?

Response: Refer to Part 6, Paragraph 7 for OSDF Project work hours. Alternate work schedules in excess of these hours will be considered if requested and at least four days in advance. Work after dark will not be permitted.

Scheduled overtime excluding split shifts will be permitted. Weekend work excluding Sundays will be permitted. Fluor Daniel Fernald reserves the right to back charge the Subcontractor for costs incurred to support schedule acceleration due to Subcontractor deficiency.

16. Question: Refer to section 02270-16 Table 02270-1 No. 2 of Mechanical Properties: tensile strength, has a "typo", the specified value listed is 300 lb/in. This is for smooth HDPE sheet, textured HDPE sheet is lower. NSC's value is 184 lb/in. Can this please be clarified.

Response: Refer to this Amendment 2 for revision to Table 02270-1.

17. Question: Reference drawing G37A - is the reference to creosote correct?

Response: Yes.

18. Question: Will the successful offeror be responsible to screen materials obtained from on-site sources to meet the material specifications?

Response: The subcontractor shall be responsible for selection of the method and removal of the oversized material larger than two inches in the construction of the compacted clay liner.

19. Question: Reference 13010-3. 3.01 A: Will radioactive material be encountered in on-site borrow areas?

Response: Work in the on-site borrow areas is not included in this contract. Fill and material for the compacted clay liner shall be obtained for the cell excavations included in this contract.

20. Question: Is the cost for the construction of the cell perimeter berm to be the entire berm even including that portion which abuts cell 2? If so, how do we build the berm without excavating cell 2? Or is some portion of the perimeter berm to be included with cell 2? If so, where on the drawings is this shown?

Response: Refer to Drawings G-5B, Rev. 2 and G-15A, Rev. 2, included in this Amendment No. 2 for construction boundaries.

21. Question: Please provide the offerers a cross section of the north entrance road.

Response: Existing north entrance road cross section consists of 6 inches of asphaltic concrete pavement over 6 inches crushed rock base course.

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22. Question: Reference 02110-4, 3.05 B: refers to section 13010 for methods of disposal on site of clear and grub materials. Please clarify the final disposition of these materials.

Response: Final disposition of cleared material shall be in a separate stockpile in the Subcontractor's work area in accordance with the approved Subcontractor's Work Area Plan (Specification Section 02110, 3.03E). Final disposition of grubbed material shall be in the On-Site Disposal Facility (OSDF) by others.

23. Question: Reference 13010-5, 3.06 A: Who is the "CQC Consultant"?

Response: The CQC Consultant is GeoSyntec Consultants, Inc., who is under contract to Fluor Daniel Fernald to perform this function. Note that the Subcontractor shall maintain its own full time QA Representative.

24. Question: Is the material stockpiled in the IMPACTED material stockpiles (East and West) considered "select" material?

Response: Reference Drawing 90X-6000-9-00077, sheet No. 15A; select impacted material shall be obtained from the east and west impacted material stockpiles.

25. Question: Does the material in the East and West IMPACTED stockpile area meet gradations for Impacted granular or Impacted non granular? Define IMPACTED.

Response: These stockpiles are acceptable for use as the protective layer and select material layers included into OSDF - Phase I for the non-granular impacted material. However, material larger than the material specified in Specification Section 02240 shall be removed. Impacted Material shall be as defined in the Impacted Material Placement Plan located in Part 7 of the solicitation.

26. Question:
a. Where is the OSDF BORROW area for clay?
b. Section 02225-3 item 2;01E... when will Bentonite be used?

Response:
a. As specified in the Section 02225, material for the clay liner shall be obtained from the OSDF excavation.
b. The bentonite shall be used to fill perforations in the clay liner created by CQC testing.

27. Question: Cells 1 and 2 are cut and fill. Does the cut material meet the 3" - spec.?

Response: Material excavated from Cells 1 and 2 contains rock fragments larger than 3 inches. Rock fragment larger than 3 inches in fill material and larger than 2 inched for the compacted clay liner material shall be removed from the excavated material as specified in sections 02200 and 02225 respectively.

28. Question:
a. Where will the clearing and grubbing material be disposed of after stockpiling?
b. What drawing shows limits of clearing and grubbing?
c. What are BATTERY limits?
d. Section 02110-4.305B refers to section 13010. Where is this section?

Response:
a. Disposition of clearing and grubbing material stockpile shall be by other subcontract.
b. Clearing and grubbing limits shall be as noted on the construction Drawing 90X-6000-G-00073, sheet 9-5A.
c. The battery limits are shown on the construction drawings defines the boundary of the entire OSDF project.
d. Section 13010 is included in Volume II of the subcontract documents.

29. Question: Ref. drawing G-5A legend item 2 notes "subgrade elevation (feet)". Is the outside of the Cell berms, as shown on this drawing considered final grade?

Response: Elevations shown on the construction drawing G-5A are the subgrade elevation unless otherwise noted. Refer to Drawings G-20A and G-21A, Cell Perimeter Details I and Cell Perimeter Details II, respectively, which show the location of subgrade elevations and finished grade elevations beyond the limit of the perimeter berm.

30. Question: Ref. Drawing G-23A detail 15/6 shows Temporary Protection (4" wide ½" thick treated plywood sheets or equivalent) if its temporary, when does it get removed?

Response: These plywood sheets get removed by others during construction for the cell 2 liner.

31. Question: Ref. drawing G-5B are the elevation shown in the cells the bottom of clay?

Response: Yes.

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32. Question: Ref. drawing G-31A plan - Show Drainage Channel Gravity Inlet Structure & Culvert...Drawing G-15A B/G-5A and C/G-5B shows this by others?

Response: The gravity drainage inlet structures (GIS) and culverts shown on Drawing G-5A, G-5B, and G-31A are part of the surface-water management system and part of this subcontract. The leachate transmission system manholes shown south of each GIS shall be constructed by others. HDPE piping from OSDF - Phase I Subcontract shall be tied into piping at the leachate transmission system manholes as shown on the construction Drawing G-15A, Sections B and C.

33. Question: Page 1 of 4 PART 7 Technical Spec. drawing. and specs indicated Chain Link Fence as drawing G-5A...verses actual drawing number of S-5A (structural).

Response: This has been corrected in the Amendment No. 1.

34. Question: Please provide Electrical Specifications for work described in Part 6, Statement of Work :

- Section 2.2.B, *Extended Utilities*...Electrical Service
- Section 2.6.A, *Construction of the Equipment Decontamination facility, including*...Overhead Power.

Response: Refer to Drawings G-37A and G-37B for electrical scope of work related to Equipment Decontamination Facility.

35. Question: Drawing G-5A detail (B)/G-15a shows subgrade elevations but detail (B) on G-15a shows finished grade. Which is correct?

Response: Detail B on Drawing G-15A shows subgrade elevation and finished grade for the liner system, protective layer and select impacted material layer in cell 1 and the intercell berm between cell 1 and cell 2. Drawings G-5A and G-5B show subgrade elevations only. For clarity purposes finished grade elevations are not shown in Drawings G-5A and G-5B.

36. Question: G-15a shows B/L PERIMETER BERM at the HIGH POINT on the berm and sloping inward toward the cell but... Drawing 22-A details show B/L PERIMETER BERM at the LOW POINT of the berm and slopes away from the cell. Which is correct?

Response: The baseline of the perimeter berm is the high point of the berm sloping inward on the construction drawings G-15A and G-22A. For clarity the

protective clay liner is shown only on the construction drawing G-22A.

37. Question: Reference Part 9, Quality Assurance Requirements, paragraph 2.3. Subcontractor is required to have Quality Inspector certified by National Institute for Certification pf Engineering Technologies for installation inspection of Geosynthetic Materials. The Construction Quality Assurance Plan, also in Part 9, states on page 4-8 that the CQC Consultant organization shall provide a Field Monitor with the same certification. In lieu of the fact that Fluor Daniel Fernald will already have a certified CQA Inspector, can the requirement to the Subcontractor be waived?

Response: Refer to Amendment 2 for revision of paragraph 2.3.

38. Question: May the two (2) 48" culverts be installed prior to June 2? If so, must we allow 7 days after removing asphalt for RAD surveying prior to removing base course of road?

Response: No, the two (2) 48" culverts cannot be installed prior to June 2.

39. Question: Please define the radiologically controlled areas (RCA's).

Reponse: There are no radiologically controlled areas anticipated for this scope of work. Reference Part 6 Statement of Work, Section 4.9 for additional information.

40. Question: Is it the intent of the specification to obtain all the clay liner material from on-site? If so, will it be a change of conditions if the clay liner must be obtained from off-site or require processing?

Response: As specified in Section 02225, material for clay liner shall be obtained from the OSDF excavation. Processing of clay shall be done in accordance with Section 02225.

41. Question: Must the material excavated from Cell 1 be stockpiled in the contractor's work area? Can it be stockpiled at future cell areas (cells 2 or 3)? Same for the Cleared & Grubbed chippings.

Response: The material excavated from Cell 1 must be stockpiled in the subcontractor's work area. It cannot be stockpiled at future cell areas. Same for the Cleared & Grubbed chippings. Refer to Drawings G-5B amd G-5C.

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42. Question: Where should the material excavated from Cell 2 be stockpiled?

Response: Refer to Drawings G-5B amd G-5C.

43. Question: Define the limits of the drain tile removal (i.e. Cell 1, Cell 2, whole facility?)

Response: Limits of the drain tile removal are the same as the physical limits for the base contract and for option 1 respectively.

44. Question: Are the other underground utilities shown on sheets SKGO4394 #1-#6 part of the drain tile removal?

Reponse: Yes.

45. Question: Is the Cell 2 drain tile removal part of base contract or Cell 2 option?

Response: Drain tile removal within the excavation limits of the base scope of work is part of the base contract. Drain tile remove within the excavation limits of option 1 scope of work is part of option 1.

46. Question: Is it the intent of the specification to mix bentonite with on site soils to obtain 10^{-7} permeability if necessary?

Response: No.

47. Question: May the CQC Consultant begin conformance testing on clay liner prior to excavation and stockpiling?

Response: The CQC Consultant will begin conformance testing on clary liner simultaneous with these activities.

48. Question: Is the construction of Sediment Basin 1A part of this contract?

Reponse: Construction of the Sediment Basin east of the North Entrance Road for Area 1A is <u>not</u> part of this subcontract.

49. Question: Can the Existing North Entrance Road be used for hauling?

Response: Access and traffic control must be maintained as outlined in Part 6, SOW, Section 2.3B. Existing North Entrance Road be used for hauling construction material only; it cannot be used for impacted material.

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50. Question: Define the limits of fence removal.

Response: As shown on Drawing G-5A, G-5B, and G-5C.

51. Question: Shall the decon facility be manned by subcontractor full time? Will anyone other than subcontractor be using decon facility?

Response: Only the subcontractor be using decontamination facility until turn over to Fluor Daniel Fernald.

52. Question: What is the proposed haul route for the impacted material stockpile to the landfill cell? What are the decon and RAD survey requirements?

Response: The haul route from the impacted material stockpile to the cell will be proposed by the subcontractor as part of the requirements of Technical Specification Section 13010 - Impacted Material Placement. There are no radiological decontamination requirements because material from the stockpile be below minimum levels for radiological contamination. Dust suppression and road cleaning from hauling operations will still be required.

53. Question: Is it the subcontractor's responsibility to remove the silt from the sediment basin/ditches prior to completion of project? If so, where shall the silt be placed?

Response: the subcontractor shall maintain the sediment basins and ditches in accordance with the Surface Water Management and Erosion Control Plan located in Part 7 of this solicitation. Any silt that is removed will be placed in the impacted material stockpile.

54. Question: Would it be acceptable to submit with our proposal a summary and table of contents for Subcontractor's Corporate Health & Safety Plan instead of the entire document?

Response: The solicitation requirement is to submit the information requested in Part 8, Environmental Health and Safety, and Training Requirements, Section B, Requirements for the Subcontractor's Safety and Health (S&H) Program, Paragraphs 1.2. 1.3, 1.4, 1.5, and 1.7 of this solicitation. Refer to Instructions to Offerors.

AMENDMENT OF SOLICITATION/MODIFICATION OF SUBCONTRACT

1. AMENDMENT/MODIFICATION NO.	2. EFFECTIVE DATE	3.
THREE (3)	NOVEMBER 27, 1996	PAGE 1 OF 6

4. ISSUED BY: Fluor Daniel Fernald
P.O. Box 538704
Cincinnati, OH 45253-8704

5. NAME AND ADDRESS OF SUBCONTRACTOR (*Name, street, county, state, and zip code*)	6. AMENDMENT OF SOLICITATION NO.	DATE
PROSPECTIVE OFFERORS	F97P272290	11/27/96
	7. MODIFICATION OF SUBCONTRACT NO.	DATE

8. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☒ The above numbered solicitation is amended as set forth in Item 10. The hour and date specified for receipt of Offers ☐ is extended ☒ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:

(a) By completing Items 5 and 11, and returning ONE (1) copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate [ ] letter [ ] telegram [ ] facsimile which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made [ ] telegram or [ ] letter or [ ] facsimile, provided each makes reference to the solicitation and this amendment, and is received prior to the opening hour date specified.

9. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF SUBCONTRACTS/ORDERS. IT MODIFIES THE SUBCONTRACT/ORDER NO. AS DESCRIBED IN ITEM 10.

A. THIS UNILATERAL MODIFICATION IS ISSUED PURSUANT TO: (*Specify authority*). THE CHANGES SET FORTH IN ITEM 10 ARE MADE IN THE SUBCONTRACT IDENTIFIED IN ITEM 7.

B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES SET FORTH IN ITEM 10.

C. THIS BILATERAL MODIFICATION IS ENTERED INTO PURSUANT TO AUTHORITY OF:

D. OTHER (*Specify type of modification and authority*)

E. IMPORTANT: CONTRACTOR ☐ is not. ☐ is required to sign this document and return _____ copies to the issuing office.

10. DESCRIPTION OF AMENDMENT/MODIFICATION

REFER TO THE ATTACHED PAGES FOR COMPLETE DETAILS OF THE ADMENDMENT NO. 3

Except as provided herein, all terms and conditions of the document 6 or 7, remain unchanged and in full force and effect.

11A. NAME AND TITLE OF SIGNER (*Type or print*)		12A. FLUOR DANIEL FERNALD A. D. Sablosky Contract Administrator	
11B. SUBCONTRACTOR/OFFEROR (*Signature of person authorized to sign*)	11C. DATE SIGNED	12B. (*Signature*)	12C. DATE SIGNED 11/27/96

SOLICITATION NO. F97P272290

SUBCONTRACT NO. FSC 597

ON SITE DISPOSAL FACILITY (OSDF) PHASE I

AMENDMENT NO. 3

November 27, 1996

1. Refer to Part 1,"Instructions to Offerors", Section 3.0, Proposal Submittal, and:

   Change "December 6, 1996" to read "December 12, 1996"

   This change is to insure that proposal due date in "Instructions to Offerors" is the same as established in Amendment 2 on the Form FS-F-798, "Solicitation, Offer, and Award" Form.

THE FOLLOWING QUESTIONS HAVE BEEN ASKED

1. Question: Is it the subcontractor's responsibility to strip wooded area topsoil only, all other topsoil to be stripped by others?

   Response: 6 inch top soil within the limit of Area 1A as shown on Reference Drawings 75X-5500-G-00235, 00439, 00440, and 00441 will be stripped by others. Top soil outside the limits of Area 1A shall be stripped and stock piled by the OSDF Phase I Subcontractor as specified in Specification Section 02110.

2. Question: What do the four (4) solid diagonal lines on Sheet G-24A, Detail A, two (2) feet from the supplemental geotextile limits @ the LCS and LDS layer and corridor transitions represent?

   Response: The four (4) solid diagonal lines on Sheet G-24A, Detail A, are the limits of the LDS and LCS drainage corridor materials.

3. Question: May subcontractor use a simultaneous butt fused dual containment HDPE pipe system instead of a staggered welded system?

   Response: Simultaneous butt fused dual containment HDPE pipe system shall not be acceptable. Subcontractor shall butt-fuse carrier pipe and containment pipe individually. Pipe joints do not have to be staggered.

SOLICITATION NO. F97P272290
SUBCONTRACT NO. FSC 597
ON SITE DISPOSAL FACILITY (OSDF) PHASE I
AMENDMENT NO. 3

4. Question: Please clarify the Type, SDR and perforations (if any) for the HDPE temporary culverts.

Response: HDPE pipe for temporary culvert shall be corrugated HDPE pipe, SPIROLITE 1000, Class 40 or approve equal.

5. Question: How far does the 6" perforated pipe go once it passes through the liner penetration box on the LCS and LDS line? Is it capped?

Response: As shown on the construction Drawing 90X-6000-G-00082, sheet G-24A, the 6" perforated pipe begins at the first joint (shown as 6" electrofusion coupler - typical) inside the cell after passing through the pipe penetration box goes up to the beginning of the drainage corridor. All perforated pipes are capped at their end inside the cell.

6. Question: Is there a rain flap between Cell 1 and Cell 2?

Response: Yes

7. Question: Do all subcontractor employees who work on site need to be U.S. citizens?

Response: Yes.

8. Question: Will low ground pressure vehicles (i.e. no more than 4.5 psi) be allowed on the GCL?

Response: No.

9. Question: What is the length and width of the impacted runoff catchment area?

Response: As shown on the construction drawings G-15A and G-22A, minimum dimensions are 110 ft plus cell slope in the north-south direction and 250 ft in the east-west direction.

10. Question: Are Subcontractor personnel required to have the 30 hour OSHA Outreach Training? If yes, Plans State Training will be provided by Fluor Daniel Fernald. Is the expense covered by Fluor Daniel Fernald or the Subcontractor?

Response: Refer to Part 8 - Safety & Health and Training Requirements, C, 1.11. The field supervision (positions as listed)

contractor or any lower tier subcontractors must complete this training. The training will be provided by Fluor Daniel Fernald at no cost to the subcontractor(s). Any expense for personnel attending the training is the responsibility of the subcontractor(s).

11. Question: When pipe penetration boxes are fabricated, should fabricator weld the 10" pipe stub into outlet, will this be done in the field?

Response: The 10 inch containment pipe at the pipe penetration box shall be shop fabricated and not welded in the field.

12. Question: Specifications require grinding (02770-9, 3.02E) 20 minutes prior to welding. This is fairly restrictive.

Response: Existing specifications are adequate, necessary and remain unchanged.

13. Question: RE: Table 02770-1, Environmental Stress Crack, ASTM D5397500 hrs is a ambitious. We recommend 300 hrs, even though we typically test for 200 hrs.

Response: SEE AMENDMENT NO 4 for revisions to TABLE. NOS ~~Existing specifications are adequate, necessary and remain unchanged~~.

14. Question: RE: GCL Specifications

A. Shear Testing Frequency - The frequency of 1/100,000 square feet is very excessive but it can be done. I would suggest this be indicated as single point analysis at one particular shear stress as otherwise we will need to perform three points every 100,000 square feet. If this is a cap testing would be best under the lower normal load of 5 psi and if a liner the higher normal load 45 psi, however, as indicated in Section 2.01 Products, part E.2.f - direct shear test duplicates - a load of 20 psi (middle of the road) may be desired.

Response: SEE Amendment No 4 for revisions to table ~~Existing specifications are adequate, necessary and remain unchanged.~~

B. Shear Testing Duplicates - Section 2.01 Products, part E.2.1 - direct shear test duplicates - there appears to be a typographical error as they indicate that duplicate tests should be performed at "20 points per square inch". I would interpret this to mean "20 pounds per

reference note 17 on drawing G-5B. The cell access road is to remain after the completion of this project.

18. Question: Is the cost of supplying and installing the supplemental geotextile over the protective layer to be included in the cost of options 2A and 2B?

Response: The supplemental geotextile is beneath the protective layer and is part of the base contract.

19. Question: Is the topsoil, as well as the trees, from the area to be cleared and grubbed to be disposed in the area labeled "Subcontractor Work Area? Will this topsoil be checked by radiation technicians in a similar manner to the topsoil in the Cell 1 and Cell 2 areas prior to this project? Will it be treated as "impacted soil"?

Response: The topsoil, as well as the trees, from the area to be cleared and grubbed are to be stockpiled (disposed of) in the area labeled "Subcontractor Work Area". The topsoil will be checked by Radiological Technicians prior to this project. This topsoil will not be treated as impacted material.

END OF AMENDMENT NO. 3

square inch" but this should be clarified. While obtaining a clarification, the residual issue could be investigated a little bit further as well.

Response: Specification section 02772, paragraph 2.01 E.f, should read "pounds per square inch" instead of "points per square inch".

C. Table 02772-1 Nonwoven Geotextile - The nonwoven geotextile of the Bentofix and likely any other needle punched GCL will not exhibit the mechanical properties specified. Prior to incorporation into the final GCL product, the nonwoven is a very loosely needled product with a grab tensile strength on the order of 20 lbs. The properties specified appear to be those of a production nonwoven geotextile - not a component of a needle punched GCL.

Response: It is not the intention of the specifications to limit GCL to only one type of geotextile. More information will be forthcoming in a later amendment.

15. Question: RE: Attachment 10, part 8 of Volume 1. Subcontract training and medical schedule locations. What training applies to GCL Installers.

Response: Attachment 10 of Part 8 - Safety & Health and Training Requirements lists the times and weekdays that various training is offered by Fluor Daniel Fernald. Proposers must refer to all sections of Part 8 including Section D - Project Specific Health & Safety Requirements Matrix to determine applicable training. Attachment 10 is for scheduling purposes after award.

16. Question; When will the temporary leachate line "by others" be completed?

Response: The temporary leachate line (from manhole 3 to the lift station) will be installed by June 30, 1997. The Leachate Conveyance System is anticipated to be operational between July 1, 1997 and July 31, 1997.

17. Question: In which pay item should the cost of the cell access road be included? What is the length of the cell access road and will it have to be removed at the completion of this project?

Response: The cost of the cell access road should be in Pay Item 3.03. The length of the cell access road is as determined by the subcontractor -

SOLICITATION NO. F97P272290

SUBCONTRACT NO. FSC 597

ON SITE DISPOSAL FACILITY (OSDF) PHASE I

AMENDMENT NO. 4

December 6, 1996

1. Refer to Part 1, Offer Section, Section 4, "Instructions to Offerors", Paragraph 17.0, Pre-Award Survey, and add the following:

"G. To be considered responsible, an offeror and its lower tier subcontractors must be able to demonstrate to the satisfaction of Fluor Daniel Fernald that it has a record of safe construction performance as demonstrated by a current workers compensation insurance experience modification rate (EMR) of less than or equal to 1.05; or the trend for the past three years is downward and none of the past three years had an EMR greater than 1.25; or for subcontractors that are too small, too new or self-insured, has an OSHA recordable incident rate of less than or equal to 12 injuries and illnesses per 200,000 man hours for the past calendar year. For lower tier subcontractors who are not known during the Pre-Award Survey, OSDF Subcontractor must be able to demonstrate after award of the OSDF Subcontract that its lower tier subcontractors meet the above safety criteria."

2. Refer to Part 6, "Statement of Work", Paragraph 4.9, and:

a. delete last sentence "This paragraph does not apply to the placement of selected impacted material ."

b. Add the following:

"Impacted material included in Options 2A and 2B shall be soil from the impacted material stockpiles and/or flyash from the active flyash pile. It is not anticipated that the handling and placement of the impacted material will require training beyond the requirements specified in Part 8, 'Environmental Health and Safety, and Training Requirements'."

3. Refer to Part 6, "Statement of Work", and add Paragraph 4.11 as follows:

"4.11 A temporary access road will be constructed by others from the existing North Entrance Road to the east boundary of the FEMP Process Area. The purpose of the road will be to allow site access for other subcontractors to the FEMP Process Area. The temporary access road will be completed by April 30 1997. This road will be located just north of the Sedimentation Basin [illegible] part of the scope of work for the OSDF Phase I Subcontract. The following is provided for the coordination purposes of the OSDF Phase I Subcontractor

Reference Attachment 1 (Partial Plan, Construction Drawing 9[illegible] 0075, Sheet No. G-5C) to Amendment No. 4. The temporary a[illegible]oad will[illegible]

AMENDMENT OF SOLICITATION/MODIFICATION OF SUBCONTRACT

1. AMENDMENT/MODIFICATION NO.	2. EFFECTIVE DATE	3.
FOUR (4)	December 6, 1996	PAGE 1 OF 9

4 ISSUED BY: Fluor Daniel Fernald
P.O. Box 538704
Cincinnati, OH 45253-8704

5. NAME AND ADDRESS OF SUBCONTRACTOR (*Name, street, county, state, and zip code*)	6. AMENDMENT OF SOLICITATION NO.	DATE
PROSPECTIVE OFFERORS	F97P272290	10/24/96
	7. MODIFICATION OF SUBCONTRACT NO.	DATE

8. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☑ The above numbered solicitation is amended as set forth in Item 10. The hour and date specified for receipt of Offers ~~is extended~~ ☒ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:

(a) By completing Items 5 and 11, and returning ONE (1) copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate [ ] letter [ ] telegram [ ] facsimile which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made [ ] telegram or [ ] letter or [ ] facsimile, provided each makes reference to the solicitation and this amendment, and is received prior to the opening hour date specified.

9. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF SUBCONTRACTS/ORDERS. IT MODIFIES THE SUBCONTRACT/ORDER NO. AS DESCRIBED IN ITEM 10.

A. THIS UNILATERAL MODIFICATION IS ISSUED PURSUANT TO: (*Specify authority*). THE CHANGES SET FORTH IN ITEM 10 ARE MADE IN THE SUBCONTRACT IDENTIFIED IN ITEM 7.

B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES SET FORTH IN ITEM 10.

C. THIS BILATERAL MODIFICATION IS ENTERED INTO PURSUANT TO AUTHORITY OF:

D. OTHER (*Specify type of modification and authority*)

E. IMPORTANT: CONTRACTOR ☐ is not. ☐ is required to sign this document and return _____ copies to the issuing office.

10. DESCRIPTION OF AMENDMENT/MODIFICATION

REFER TO THE ATTACHED PAGES FOR COMPLETE DETAILS OF THE AMENDMENT NO. 4

Except as provided herein, all terms and conditions of the document 6 or 7, remain unchanged and in full force and effect.

11A. NAME AND TITLE OF SIGNER (*Type or print*)		12A. FLUOR DANIEL FERNALD A. D. Sablosky Contract Administrator	
11B. SUBCONTRACTOR/OFFEROR (*Signature of person authorized to sign*)	11C. DATE SIGNED	12B. (*Signature*)	12C. DATE SIGNED 12/06/96

FS-F-4002 (09/15/94)

000065

SOLICITATION NO. F97P272290
SUBCONTRACT NO. FSC 597
ON SITE DISPOSAL FACILITY (OSDF) PHASE I
AMENDMENT NO. 4

Section 02772, "Geosynthetic Clay Liner", Paragraph 2.01, "Geosythetic Clay Liner D.", and:

- change subparagraph 6. to read:

"6. Geotextile backings are woven and nonwoven materials, manufactured with polypropylene or polyester material, and conforming to the manufacturer's requirements."

- Delete subparagraph "8."

- Renumber existing subparagraph "9." to "8.".

Note: This changes a response included in Amendment No. 3.

8. Refer to Volume II, Part 7, "Technical Specification and Drawings", Specification Section 02772, "Geosynthetic Clay Liner", Paragraph 2.02, Manufacturing Quality Control". Change subparagraph B to read:

"B. Perform manufacturing quality control test to demonstrate that geosynthetic clay liner properties conform to the stated requirements. Note, the hydraulic conductivity and direct shear may be performed by either the subcontractor or the manufacturer.

Test	Procedure	Frequency
bentonite content	ASTM D 5261	1/40,000 ft²
bentonite moisture content	ASTM D 4643	1/100,000 ft²
bentonite free swell	ASTM D 5890	1/100,000 ft²
grab strength	ASTM D 4632	1/40,000 ft²
grab elongation	ASTM D 4632	1/40,000 ft²
bentonite hydraulic conductivity	GRI-GCL2	1/100,000 ft²
direct shear	ASTM D 5321	1/100,000 ft²"

Note: This changes a response included in Amendment No. 3.

9. Refer to Volume II, Part 7, "Technical Specification and Drawings", Specification Section 02772, "Geosynthetic Clay Liner", Table 02772-1, "Required Geosynthetic Clay Liner Property Values", and:

- Delete the header "Woven Geotextile" and all property entries thereund

- Delete the header "Nonwoven Geotextile" and all property entries th

be isolated from the OSDF Subcontractor's Work Area by fencing along the north and south edges of the road. This fencing shall be installed and maintained by others. Cleaning and dust control of the temporary access road will be by others.

Installation and maintenance of temporary fencing, gates, or signage along the existing North Entrance Road as required for construction shall be the responsibility of the OSDF Phase I Subcontractor. North and south bound traffic on the existing North Entrance Road will have the right of way. The requirements in Part 6 - Statement of Work pertaining to Existing North Entrance Road access, crossing existing roads that are in use, traffic control, and vehicular traffic on existing roads apply."

4. Refer to Volume II, Part 7, "Technical Specification and Drawings", Specification Section 02230, "Road Construction", Paragraph 2.01.B. and change to read:

"B. Furnish subbase material and base material consisting of crushed rock or angular soil free of organic matter or other deleterious materials, which meets the requirements of Item 304.02 and 703.04 of the Ohio DOT Specifications."

5. Refer to Volume II, Part 7, "Technical Specification and Drawings", Specification Section 02770, "Geomembrane Liner", Table 02770-1 and change Note 2 to read:

"2. Time-to-failure at a tensile stress of 30 percent of the tensile yield strength."

Note: This changes a response included in Amendment No. 3.

6. Refer to Volume II, Part 7, "Technical Specification and Drawings", Specification Section 02772, "Geosynthetic Clay Liner", Paragraph 1.04 A.3, and insert the following subparagraphs:

"4. Manufacturer's requirements for any geotextile component of the geosynthetic clay liner. At a minimum, mass per unit area, grab strength, and grab elongation are to be required.

5. Certification that manufacturer's requirements for geotextile components are met."

Renumber existing subparagraphs "4." and "5." to be "6." and "7." respectively.

Note: This changes a response included in Amendment No. 3.

7. Refer to Volume II, Part 7, "Technical Specification and Drawings", Specification

needle punched GCL will not exhibit the mechanical properties specified. Prior to incorporation into the final GCL product, the nonwoven is a very loosely needled product with a grab tensile strength on the order of 20 lbs. The properties specified appear to be those of a production nonwoven geotextile - not a component of a needle punched GCL.

Response: See changes to Specification Section 02772 in this Amendment No. 4.

5. Question: Will areas of permanent vegetation require topsoil respreading?

Response: No.

6. Question: Subbase aggregate material is required at the Impacted Material Haul Road, Access Corridor, and Cell Access Road. Provide a specification for this material.

Response: Refer to changes in Specification Section 02230 Paragraph 2.1.B, in this Amendment No. 4.

7. Question: Provide the southerly limit (Grid Coordinate or dimension) for placement of the 2 foot Select Impacted Material layer.

Response: Refer to Construction Drawings G-15A and G-22A and revise as follows:

"Limits of the Select Impacted Material layer in OSDF Cell I shall be as follows:
A. North Slope- top of perimeter berm elevation
B. East Slope- top of perimeter berm elevation
C. West Slope- top of perimeter berm elevation except at the impacted runoff catchment area.
D. South slope- 5 feet north of the intersection of the 2% base slope and 4 to 1 intercell berm slope, except at the impacted runoff catchment area."

8. Question: Provide either grid coordinate or location for the tie-in to the potable water supply.

Response: Grid coordinate for potable water supply is as shown on Construction Drawing G-2A.

9. Question: Will the utility lines along the North Entrance Road be de-engerized or otherwise shut off by FDF prior to their abandonment?

Response: Yes, the utility lines along the North Entrance Road will be de-engerized or otherwise shut off by FDF prior to their abandonment.

- Change Note 2 to read: "Not used".

Note: This changes a response included in Amendment No. 3.

10. Refer to Construction Drawing 90X-6000-G-0075, Sheet No. G-5C, Rev. 0, dated October 14, 1996 and incorporate the following changes which are required to accommodate the construction of the temporary access road:

a. Move subgrade control points 1372, 1373, 1375, 1376, 1378, 1379, 1380, 1381 and 1382 by ten feet south.

b. Change subgrade control point 1377 to N-481, 134; E-1350, 670.

11. **Refer to Amendment No. 3, Question No .9, and change to read:**

"Question: What is the length and width of the impacted runoff catchment area?

Response: As shown on Construction Drawings G-15A and G-22A, minimum dimensions are 110 ft plus cell slope in the east-west direction and 250 ft in the north-south direction."

THE FOLLOWING QUESTIONS HAVE BEEN ASKED

1. Question: Section A on Drawing G-15A shows an intercell berm between cells A and B. Where is this berm shown on Drawing G-5A?

Response: Construction Drawing G-5A shows the subgrade plan for the liner and the intercell berm and intentionally does not show the intercell berm to add greater clarity to the subgrade plan. Construction Drawing G-15A shows the liner and intercell berm construction.

2. Question: What is the drain tile material and size?

Response: Existing underground drain tiles are 10 inch clay pipes.

3. Question: May clearing and grubbing begin prior to Chain Link Fence and sediment basins being 100% complete?

Response: Clearing and grubbing may begin prior to the completion of the chain link fence. Clearing and grubbing of the area west of the North Entrance Road may begin prior to completion of the sedimentation pond.

4. Question: D. Table 02772-1 Nonwoven Geotextile - The nonwoven geotextile of

structure shall be 3 horizontal to 1 vertical. The south limit of riprap at the GIS shall be the limit of manhole cover slab grading. The north limit of riprap at GIS shall be 20 feet north of control point 8*07 and 8*08.

The construction phase drainage channel as shown in detail 28 shall begin from the control point 1162 (refer to construction drawing G-5A) and shall continue south to GIS 5 as shown on construction drawing G-5B.

Add the following notes for control points on drawing G-05A:

- Control Point No. 1302 - begin East drainage channel.
- Control Point No. 1303 - begin North drainage channel.
- Control Point No. 1186 - end North drainage channel and daylight at existing grade.
- Control Point No. 1193 - begin West drainage channel.

16. Question: Please clarify type of Rip Rap to be used.

Response: Riprap in this subcontract shall be Type D except in the sedimentation basins which shall use Type C riprap. Riprap shown on sheet G-30A shall be type D. Riprap shown on sheet G-41a shall be type C.

17. Question: Drawing G-5C and Sections A and B on Drawing G-41A detail the Sedimentation Basin Principal Spillway and Drainage Culverts. The extent of the Rip Rap (width) cannot be determined from the drawings. Please clarify.

Response: The riprap outlet protection at the Principal Spillway outlet shall be 9 feet wide at the pipe outlet and 23 feet wide at the southern end of the riprap apron. The length of the riprap apron shall be 35 feet as shown in Section A, Drawing G-41A.

18. Question: Exhibit A, Construction Schedule, Amendment No. 2, calls for Contract Duration of 265 calender days. Based upon a March 11, 1997 Notice to Proceed, the completion date would be December 1, 1997. Options would extend the completion date to December 31, 1997. However, the milestone for placement of impacted materials 2A and 2B would necessitate that these options were completed by December 15, 1997 and November 26, 1997 respectively. Please clarify.

Response: Fluor Daniel Fernald's planning schedule for the Base Contract duration (265 calendar days) includes a period of time for demobilization and contract closeout that does not involve field work. Based on demobilization and contract closeout, field work would complete in

10. Question: Will haul road speeds within the grading limits for scrapers / off-road trucks be limited to 10 MPH?

Response: Haul road speeds within the grading limits for scrapers / off-road trucks will be limited to 10 MPH.

11: Question: Referencing Option 2A, Pay Item Description 10.01, will the flyash be used as protective cover in the catchment area and on top of the intercell berm and beyond into Cell 2, i.e., the entire layer?

Response: Protective layer in the impacted runoff catchment area shall be granular material as specified in Section 02710. Limits of the impacted runoff catchment area shall ve as shown on the Construction Drawing G-22A and G-23A. Limits of the select impacted material layer are defined in question 90 above.

12. Question: Pay Item Descriptions 10.0 and 11.0 indicate a one foot "Protective layer" followed by a two foot protective layer of impacted material. A total of three feet in thickness.

Drawing 15A shows a one foot "Protective Layer" followed by a three foot layer of impacted material. A total of four feet in thickness. Please clarify.

Response: The Pay Item Description and Sections 2.11 and 2.12 of Part 6 are correct and control.

13. Question: SPR 12-9 and SPR 12-10 are reference in Part 8 of the solicitation. Please provide.

Response: SPR 12-9 and SPR 12-10 are included in this amendment.

14. Question: Would FDF supply a Pay Item Description with columns for placing price as a convenience to offerors in submitting a Pay Item Schedule.

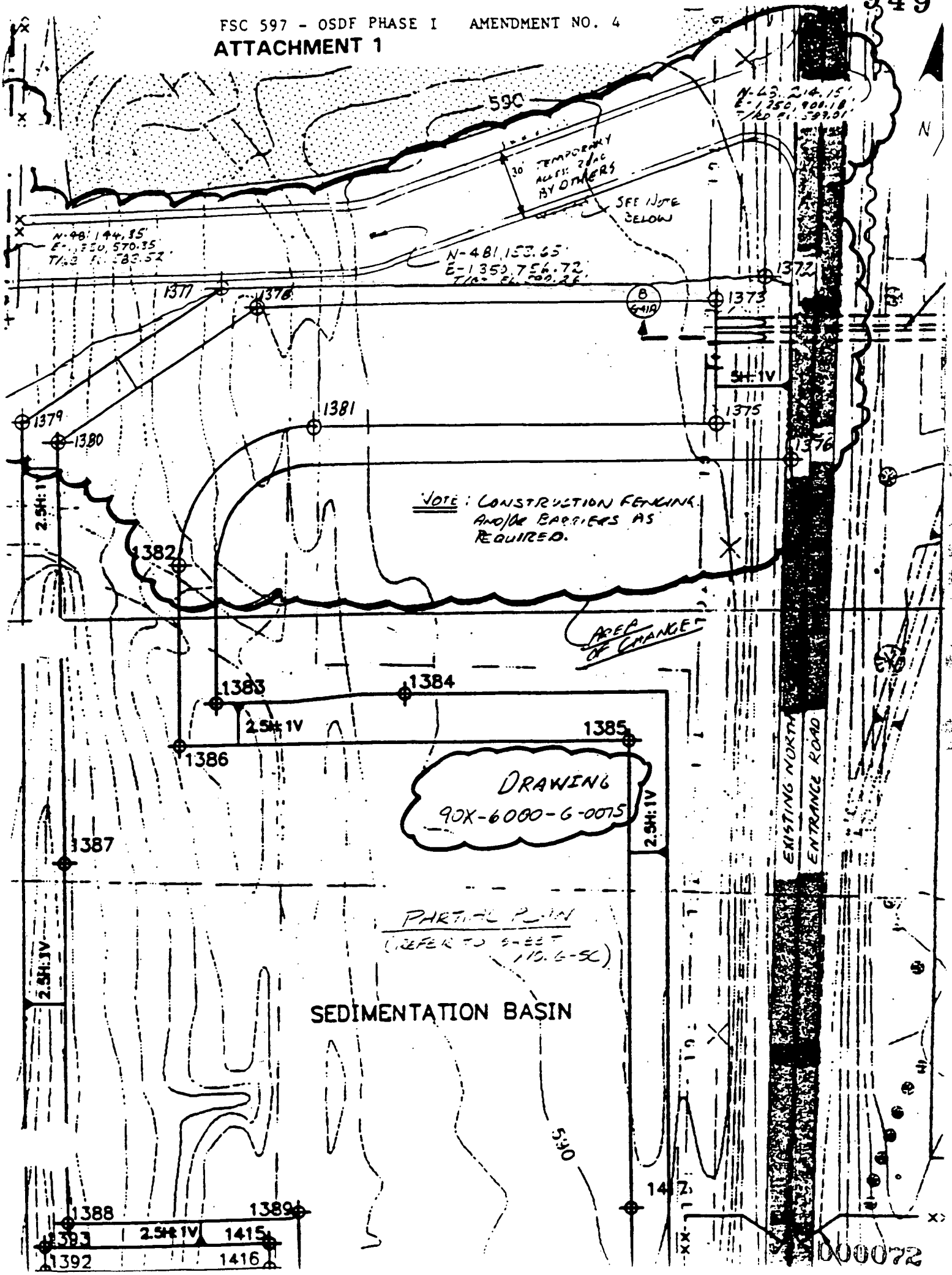
Response: A Pay Item Description with columns for placing price is attached as a convenience to offerors in submitting a Pay Item Schedule.

15. Question: Drawing G-31A, Note 9 states in part: "Type D Rip Rap shall be placed to the North/South limits as shown in Detail 31 and to the East/ West limits shown in Section B." Please clarify the limits shown in Section B.

Response: Refer to construction drawing G-31A Note 9, Line 3: East - West limits of the riprap at the gravity inlet structure (GIS) shall be as shown on section A instead of section B. Riprap slope east of the gravity inlet

FSC 597 - OSDF PHASE I AMENDMENT NO. 4

ATTACHMENT 1



something less than 265 calendar days. Therefore, 265 calendar days from N.T.P. is correct and represents total Base Contract completion (without any options).

The milestones for Option 2A and 2B (61 and 42 calendar days after October 15, 1997 respectively) are activity completion milestones for those specific options, not contract completion milestones. The period of time after those completion milestones (the 295 calendar days from Notice to Proceed less the completion milestone dates) may also include time for demobilization and contract closeout that is not related to Option 2A or 2B field work.

Based on Fluor Daniel Fernald's planning schedules, the milestone completion of Option 2B could possibly have a date that would precede the Base Contract Completion date, depending upon the amount of time for demobilization and contract closeout that is included. The durations and completions milestones as issued in Amendment 2 are correct. It is the Offeror's responsibility to submit a schedule that satisfies the listed durations for contract or milestone completion.

END OF AMENDMENT NO. 4

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1702	(2)S/C NO.: FSC- 597	(5)Pg 1 OF 1	(6)DATE 8 Aug 97
(3)S/C TITLE: OSDF Phase 1 Construction			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	(4A)RCI/DCN TITLE: Subgrade Preparation		(11)DCN NO.: 1702-022

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Specification 20100-TS-0002 Section 02200	Part 3.07.B.	0	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☐DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Civil Review Only

Change Specification Section, Section 02200, Part 3.07.B by replacing the third sentence with "Except for roads and access corridors, soils shall not exhibit pumping or develop ruts of two inches or more in depth. Minor rutting, defined as less than 2-inches in depth, shall be graded, ~~and~~ scarified ~~or~~ and covered with suitable soil, as specified. "

DGB 8 Aug 97

(10)REQUESTOR: Daniel Bodine	COMPANY: GeoSyntec	(12)FCE / PE	DATE: 8/8/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES

(14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Daniel Bodine 8 Aug 97	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:	
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY)			DATE:
PERFORMANCE GRADE: (17) 5			8/8/97
(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☐YES ☐NO (19)			

FS-F-4259 (10/01/96)

ORIGINAL

ENTERED

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1702	(2)S/C NO.: FSC- 597	(5)Pg 1 OF 1	(6)DATE 8 Aug 97
(3)S/C TITLE: OSDF Phase 1 Construction			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	(4A)RCI/DCN TITLE: Clay Liner Placement		(11)DCN NO.: 1702-023

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Specification 20100-TS-0002 Section 02225	Part 3.03.F.	0	
Petro Earthwork Plan, Submittal No. 11	PET-013	3	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

Civil Review Only

Change Specification, Section 02200, Part 3.03.F by replacing the first sentence and adding an additional new second sentance as follows:

" In areas where compaction is to be performed using the Caterpillar 815B, or equivalent equipment, place the clay liner material in loose lifts with a thickness of 7 to 8 inches, except for the first lift over subgrade. The first lift over subgrade shall be nominal 10-inch loose thickness. "

(9)☐DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

The change in loose lift thickness for the initial lift over subgrade is consistent with procedures used in the Test Pad Program and is necessary to prevent excessive subgrade material from mixing with the initial lift during lift compaction with the Caterpillar 815B compactor.

(10)REQUESTOR: Daniel Bodine	COMPANY: GeoSyntec	(12)FCE / PE	DATE: 8/11/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☒YES

(14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Daniel Bodine 8 Aug 97	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY)		DATE: 8/11/97
PERFORMANCE GRADE: (17) 4		
(18)CONSTRUCTION CONCURRENCE:	DATE: 8/11/97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:
PURCHASE REQUISITION REQUIRED: ☐YES ☒NO (19)		

FS-F-4259 (10/01/96)

ORIGINAL

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1702	(2)S/C NO.: FSC- 597	(5)Pg 1 OF 1	(6)DATE 11Aug 97

(3)S/C TITLE: OSDF Phase 1 Construction

(11)RCI NO.:

(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐

(4A)RCI/DCN TITLE: Riprap Protection Width

(11)DCN NO.: 1702-024

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Drawing 90X-6000-G-00089	Sheet G-41A	0	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☐DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Civil Review Only

The width for the Riprap Type C Protection for the Sedimentation Basin Outlet (2-48-inch) Culverts was not identified on the drawings. Add the following beneath the words, Type C Ripap Outlet Protection, on Section B, Drawing G-00089, Sheet G-41A:

16' Wide Centered At Culvert Outlet Area

(10)REQUESTOR: Daniel Bodine COMPANY: GeoSyntec

(12)FCE / PE: [signature] DATE: 8/11/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☒YES

(14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Daniel Bodine 11 Aug 97 DATE:

(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 8/11/97

PERFORMANCE GRADE: (17) 5

(18)CONSTRUCTION CONCURRENCE: DATE: 08/11/97

(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

PURCHASE REQUISITION REQUIRED: ☐YES ☒NO (19)

FS-F-4259 (10/01/96)

ORIGINAL

Design Change Notice (DCN) Report for Leachate Conveyance System (LCS)
Subcontract No. FY 589

DCN NO.	TITLE	DESCRIPTION	Transmitted to Agencies	
			U.S. EPA	OEPA
1700-001	EXTEND 4" WATER LINES FROM PLANT AREA TO OSDF CONSTRUCTION AREA	Extend water lines for dust control and contractor usage.	8/18/97	8/18/97
1700-002	ADDITIONAL UNDERGROUND PIPING	Install additional utilities in common trench for cost savings.	8/18/97	8/18/97
1700-003	BIODENITRIFICATION BYPASS PIPING	Install additional utilities (biodenitrification line) in common trench for cost savings.	8/18/97	8/18/97
1700-004	CHANGE PIPING CONFIGURATION	Add yard hydrants for future contractor potable water access for dust suppression.	8/18/97	8/18/97
1700-005	INJECTION DEMO PIPE LINE	Install additional utilities in same trench for ground water recharge.	8/18/97	8/18/97
1700-006	REVISED POLE LOCATIONS	Revise coordinates to ensure poles are set outside road construction limits.	8/18/97	8/18/97
1700-007	PIPING SPEC CHANGES	Value engineering by OSDF team concluded that reducing pipe wall thickness (SDR's) of HDPE pipe will reduce material cost while still meeting piping design requirements.	8/18/97	8/18/97
1700-008	LDS/LCS ACCESS COVERS	Value engineering by OSDF team concluded that revising manhole and cleanout access covers from 4'x4'&3'x3' stainless steel to 3'x3'&2'x2' aluminum, respectively, will reduce material costs while still meeting requirements for access and longevity.	8/18/97	8/18/97

Design Change Notice (DCN) Report for Leachate Conveyance System (LCS)
Subcontract No. FY 589

DCN NO.	TITLE	DESCRIPTION	Transmitted to Agencies	
			U.S. EPA	OEPA
1700-009	SURVEYING SPECIFICATION	Revised surveying spec. for leachate conveyance to represent actual needs. Contract spec. was duplicate of surveying spec. for cell construction which is considerably more complex.	8/18/97	8/18/97
1700-010	ADD/ADJUST UTILITIES	Perform additional excavation for additional underground utility conduits.	8/18/97	8/18/97
1700-011	FORCE MAIN CLEANOUTS	VOIDED	N/A	N/A
1700-012	HEAT TRACE GFI C.B.	Change specification of acceptable ground fault interrupter breaker.	8/18/97	8/18/97
1700-013	ALIGNMENT CHANGE FT-38 TO BSL	Move alignment of approx. 33' of leachate line 20' west to avoid interference with new gravel road. Total length of leachate line is unchanged.	8/18/97	8/18/97
1700-014	FORCE MAIN CLEANOUTS	Revise 54" force main cleanout manholes to 24". Four 54" manholes are still needed for flow meters and air release valves only.	8/18/97	8/18/97
1700-015	DELETE ELECTRICAL FEEDER TO TRAILERS	Remove a portion of the 480v electrical work from the contract.	8/18/97	8/18/97
1700-016	POLE MODIFICATIONS	Relocates 2 utility poles and add a telephone pole.	8/18/97	8/18/97
1700-017	FLOW METERS	Contract specifies a flow meter with 316 Stainless Steel electrodes. Zirconium electrodes are industry standards and are acceptable for leachate.	8/18/97	8/18/97

Design Change Notice (DCN) Report for Leachate Conveyance System (LCS)
Subcontract No. FY 589

DCN NO.	TITLE	DESCRIPTION	Transmitted to Agencies	
			U.S. EPA	OEPA
1700-018	INTERFACE ADJUSTMENTS FOR TIE-IN OF GROUNDWATER OPT. INJ. SYS.	Move groundwater injection system tie-in points to improve constructability.	8/18/97	8/18/97
1700-019	LDS AND LCS MANHOLES AND PLS CONTROL SYSTEM MODIFICATIONS	Change specification for leak detection power to 24 volt from 12 volt.	8/18/97	8/18/97
1700-020	ALUMINUM ACCESS COVERS FOR PERMANENT LIFT STATION	Change specification for manhole covers from stainless steel to aluminum.	8/18/97	8/18/97
1700-021	HDPE DUAL CONTAINMENT PIPE	Change internal spacer intervals of leachate pipe from 4' to 4½'.	8/18/97	8/18/97
1700-022	PAVEMENT RESTORATION DETAIL	Add gravel base to pavement restoration to be consistent with site paving practices. Includes specifications of material to use and compaction requirements.	8/18/97	8/18/97
1700-0023	K-65 CASING PIPE	Substitute 12" pipe for 14" pipe to encase 8" leachate line under K-65 utility trench.	8/18/97	8/18/97
1700-0024	CONCRETE TESTING	Move concrete testing responsibilities from Village Builders to GeoSyntec contract. GeoSyntec is responsible for other testing and has lab set-up on site.	8/18/97	8/18/97
1700-025	ALIGNMENT CHANGE	Change the alignment of the LCS and other underground utilities.	8/18/97	8/18/97

Design Change Notice (DCN) Report for Leachate Conveyance System (LCS)
Subcontract No. FY 589

DCN NO.	TITLE	DESCRIPTION	Transmitted to Agencies	
			U.S. EPA	OEPA
1700-026	COMBINED TRENCH RELOCATION	Relocate LCS and other underground utilities to avoid monitoring wells.	8/18/97	8/18/97
1700-027	ELEVATION OF G.W.10	Install 10" groundwater pipe (GW-10) at the same elevation that the LCS line is installed.	8/18/97	8/18/97
1700-028	HILTI KWIK BOLT ANCHOR MAT. SPEC.	Use alternate anchor studs, as specified.	8/18/97	8/18/97
1700-029	ISCO SUPPLIED HDPE PIPE FITTINGS	Implement additional QC inspections for fittings without material certifications.	8/18/97	8/18/97
1700-030	END SEAL ON CASING	Use fiber glass insulation with waterproof cement grout where specified link seal sizes are not available.	8/18/97	8/18/97
1700-031	CE-6 BDN STUB-OUT	Stub-out biodenitrification conduit in accordance with the drawing.	8/18/97	8/18/97
1700-032	STAVER DITCH PIPE INSTALLATION	VOIDED (Superseded by DCN 1700-049.)	N/A	N/A
1700-033	PIPE-HYDROSTATIC TESTING	Under certain conditions, pipe pressure testing may be performed after backfilling.	8/18/97	8/18/97
1700-034	SEDIMENT CONTROL	Replace straw bales with check dams and silt fences.	8/18/97	8/18/97
1700-035	PIPE EMBEDMENT DETAIL	Modify typical pipe bedding detail, typical pavement restoration detail, and Spec. 02215.	8/18/97	8/18/97

Design Change Notice (DCN) Report for Leachate Conveyance System (LCS)
Subcontract No. FY 589

DCN NO.	TITLE	DESCRIPTION	Transmitted to Agencies	
			U.S. EPA	OEPA
1700-036	STEEL PIPE CASINGS UNDER K-65 TRENCH	Modify the size, elevation, and length of the steel pipe casings under the K-65 Trench.	8/18/97	8/18/97
1700-037	480 VOLT FEED FROM BLDG. 77	Change the source of 480 volt service.	8/18/97	8/18/97
1700-038	WARNING TAPE INSTALLATION	Change the location of warning tape placement.	8/18/97	8/18/97
1700-039	MANHOLE EMBEDMENT FILL	Modify the manhole embedment fill gradation.	8/18/97	8/18/97
1700-040	LCS ALIGNMENT ADJUSTMENT	Shift the alignment of the underground utilities to avoid a fire hydrant and utility pole.	8/18/97	8/18/97
1700-041	CLEANOUT BACKFILL REQUIREMENTS	Backfill cleanouts with pipe bedding sand from the LCS to the base of the cleanout.	8/18/97	8/18/97
1700-042	TEST/ACCEPTANCE CRITERIA FOR 6" FUEL GAS PIPING	Perform testing/acceptance in accordance with attached standards.	8/18/97	8/18/97
1700-043	HYDROSTATIC TEST-MANHOLES	Perform hydrostatic testing of manholes prior to backfilling.	8/18/97	8/18/97
1700-044	CLEANOUT MANHOLE BACKFILL REQUIREMENTS	Implement revised backfill requirements for cleanout manholes.	8/18/97	8/18/97
1700-045	GRAVITY FLOW SEGMENT ALIGNMENT CHANGE	Install temporary leachate transmission line in accordance with the stated alignment changes.	8/18/97	8/18/97
1700-046	HDPE PIPE PROTECTION	Use blanket to keep pipe from excessive heating in the sun.	8/18/97	8/18/97

Design Change Notice (DCN) Report for Leachate Conveyance System (LCS)
Subcontract No. FY 589

DCN NO.	TITLE	DESCRIPTION	Transmitted to Agencies	
			U.S. EPA	OEPA
1700-047	LTS TRENCH ALIGNMENT CHANGE	Change alignment to avoid fenced enclosure containing debris.	8/18/97	8/18/97
1700-048	PNEUMATIC TESTING OF 6" FUEL GAS	Use ASME standard B31.3 for pneumatic leak test.	8/18/97	8/18/97
1700-049	STAVER DITCH PIPE INSTALLATION	Change the trench cross-section due to a soft base encountered in the field.	8/18/97	8/18/97
1700-050	REVISED PIPING - AWWT AREA	Use a long-radius bend in pipe in place of 4" fitting.	8/18/97	8/18/97
1700-051	S.S. PIPE AND SUPPORTS	Use an alternate type of stainless steel pipe.	8/18/97	8/18/97

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1700	(2)S/C NO.: Wise Services	(5)Pg 1 OF 4	(6)DATE Nov-04-96
(3)S/C TITLE: Installtwo each 4" water lines to the OSDF construction area.			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E ☐ MX C X OTHER ☐	(4A)RCI/DCN TITLE: Extend 4" Water lines from Plant Area to OSDF Construction Area		(11)DCN NO.: 1700-001

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Site Utility Drawings Grid 7	22H-5500-P-00666	9	
Site Utility Drawings Grid 5	22H-05500-P-00664	11	
Site Utility Drawings Grid 3	22C-5500-P-00662	10	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)XDCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

DCN justification: This DCN is required for the purpose of installing two each 4" water supplies to the OSDF construction area. - See attached sketches SK-20110-001 thru SK-20110-003

(10)REQUESTOR: James C. Jenkins	COMPANY: Fluor Daniel Fernald	DATE:	(12)FCE / PE James C. Jenkins	DATE:Nov. 04-96

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES

(14)FOR DCN: ☒APPROVED ☒APPROVED AS NOTED ☐DISAPPROVED

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE: 11-7-96	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2cuc1
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY)		DATE: 11/7/96
PERFORMANCE GRADE: (17) 4		
(18)CONSTRUCTION CONCURRENCE	DATE: 11-7-96	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:
PURCHASE REQUISITION REQUIRED: ☒YES ☐NO (19)		

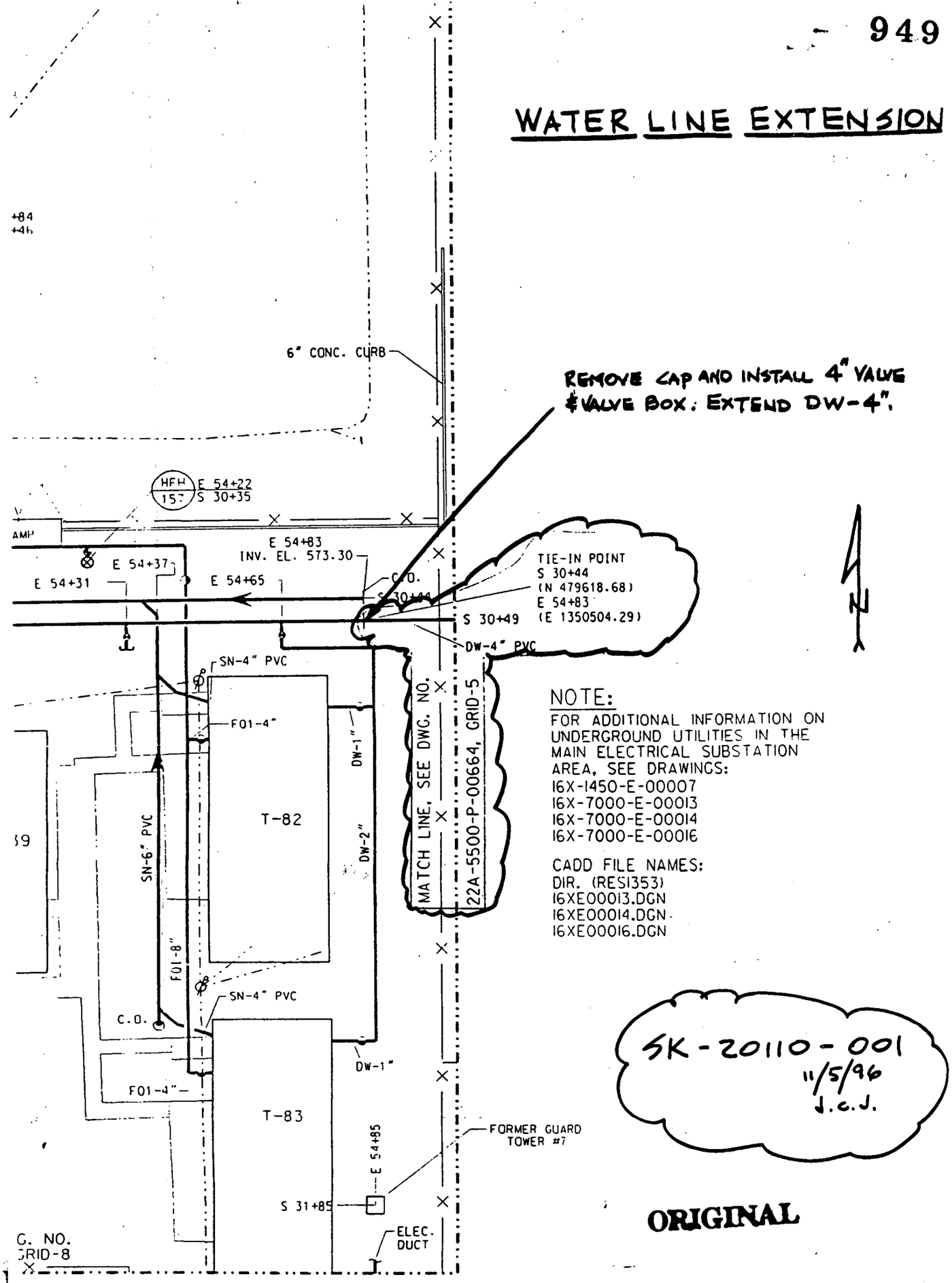
FS-F-4259 (10/01/96)

ORIGINAL

EXCLUDED

000083

WATER LINE EXTENSION



NOTE:

FOR ADDITIONAL INFORMATION ON UNDERGROUND UTILITIES IN THE MAIN ELECTRICAL SUBSTATION AREA, SEE DRAWINGS:
16X-1450-E-00007
16X-7000-E-00013
16X-7000-E-00014
16X-7000-E-00016

CADD FILE NAMES:
DIR. (RESI353)
16XE00013.DGN
16XE00014.DGN
16XE00016.DGN

SK-20110-001
11/5/96
J.C.J.

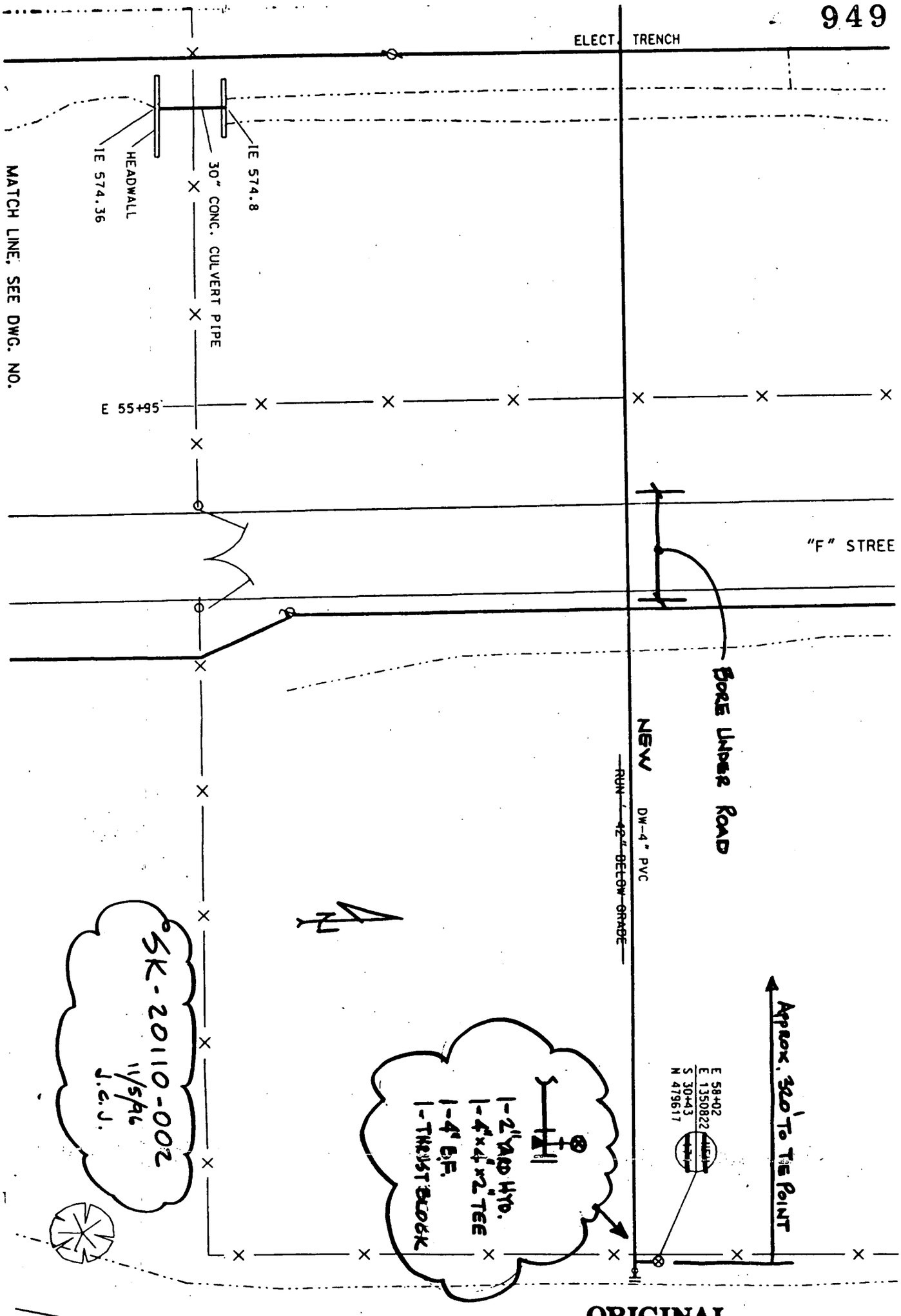
ORIGINAL

WESTINGHOUSE ENVIRONMENTAL MANAGEMENT CO. OF OHIO
FERNALD, OHIO
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
U.S. DEPARTMENT OF ENERGY

BLDG. 31 & 46, AREA 16 YARD AREA
GRID 7
UNDERGROUND UTILITIES
SCALE 1"=20'
1700-001
Page 2 of 4

DATE	2-20-90	22H-5500-P-00666	8
DRAWN	J. KING		

000084


ELECT. TRENCH
HEADWALL
IE 574.36
30" CONC. CULVERT PIPE
IE 574.8
MATCH LINE, SEE DWG. NO.
E 55+95
"F" STREE
BORE UNDER ROAD
NEW DW-4" PVC
RUN 42" BELOW GRADE
SK-20110-002
11/5/96
J.C.J.
1-2" MAN HYD.
1-4"x4"x2" TEE
1-4" E.F.
1-THRUST BLOCK
E 58+02
E 1350822
S 30+43
N 479617
APPROX. 360' TO TIE POINT

ORIGINAL

COORDINATE ISOLATION WITH UTILITIES

949

E 54+25

MATCH LINE, SEE DWG. NO. 22C-5500-P-00661, GRID-2

S 14+35

DW-4"

4" PVC 18" BELOW GRADE
(1) WIRE BUNDLE

S 14+66

PIV

ST-12"-RCP @ 2.0%

CB 224 | E 53+81 / S 14+89
INV. EL. 582.0
ELEV. 585.8

NEW DW-4"-PVC 4.43" BELOW GRADE

300'±

(APPROX.)
E 54+87.3
S 15+04.4

THRUST BLOCK

N 481,151.40±
E 1,350,870.21±

ORIGINAL

Page 4 of 4
1700-801

000086

SK-20110-003
11/5/96
J.C.J.

EXIST.
EXIST.
EXIST.
OR
EXIST.
NEW

REPLACE EXIST. 90° ELL. WITH TEE OR INSERT TEE IN EAST WEST RUN.

~~MATCH LINE, SEE DWG. NO. 93X-5500-6-00310 #NFEMP37.06N4~~

1-4"x4"x2" TEE
4" VALVE & BOX
4" B.F.
2" YARD HYD.
1 THRUST BLK.

22C-5500-P-00662
R/9

EMH 226 | E 52+86 / S 16+25

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE

WP / WO NO.: 1700 Proj - 20110	S/C NO.: 589	Pg 1 OF 2	DATE: 12/02/96
S/C TITLE: LEACHATE CONVEYANCE SYSTEM		RCI NO.: N/A	
RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	RCI/DCN TITLE: ADDITIONAL UNDERGROUND PIPING	DCN NO.: 1700-002	

DOCUMENTS AFFECTED	DOCUMENT NOS.	REV.	OTHER
CERTIFIED FOR CONSTRUCTION TECHNICAL SPECIFICATIONS SUBCONTRACT NO. FCS 589 20110-02667	SECTION 02667	0	
PARSONS CFC DRAWINGS - PO 164	DWG. 92X-5900-G-00251 DWG. 92X-5900-G-00261 DWG. 92X-5900-G-00266	0 0 0	
PARSONS CFC DRAWINGS - PO 128	DWG. 96X-5900-G-00315 DWG. 96X-5900-G-00316	0 0	

☐ RCI - INQUIRY ☐ PRE-SCREEN FOR USQD BY PROJECT ENGINEER ☒ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

EXISTING CONDITION: REFERENCED DRAWINGS AND SPECIFICATIONS PROVIDE FOR THE INSTALLLATION OF A SINGLE, UNDERGROUND DOUBLE WALLED HDPE PIPE FOR LEACHATE CONVEYANCE SYSTEM IN TRENCH IN AWWT AREA WITH AWWT EXPANSION INFLUENT AND EFFLUENT PIPING INSTALLED IN SEPARATE TRENCH.

PROPOSED CHANGE: INSTALL ADDITIONAL UNDERGROUND HDPE AND DUCTILE IRON PIPING IN SAME TRENCHING AS LEACHATE CONVEYANCE PIPING AS PER ATTACHED SCOPE OF WORK AND SPECIFICATION.
NOTE: RELOCATION OF AWWT PIPING HAS BEEN PREVIOUSLY APPROVED VIA DCN NO. 1710-003.

JUSTIFICATION: INSTALLATION OF THE ADDITIONAL PIPING IN SAME TRENCHING WILL SAVE TIME AND CONSTRUCTION COSTS AWWT EXPANSION, SEWAGE TREATMENT PLANT, AND BDN BY-PASS PROJECTS.

REQUESTOR: T.E. ESCUE COMPANY: FDF	PE: J.C. JENKINS
T.E. Escue 2/24/97	J. C. Jenkins 2/25/97

RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES — FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See PARSONS Approved AS NOTED COMMENTS Attached as Page 1 of 1

PARSONS — RCI - DCN ACCEPTANCE

DESIGN ORGANIZATION APPROVAL:	CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Carlton Schroeder 3/8/97	~~SCPT+~~ SCTP1 TCE 4/23/97
FERMCO PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY)	
PERFORMANCE GRADE: 4 James C. Jenkins	3/10/97
CONSTRUCTION CONCURRENCE: Richard L Mahurin 3/10/97	WORK COMPLETED: (SIGNOFF BY FCE OR PE)
PURCHASE REQUISITION REQUIRED: ☐ YES ☐ NO	DATE:

ORIGINAL

FS-F-4259 (03/15/96)

DCN 002

received

000087

SCOPE OF WORK
DESIGN CHANGE NOTICE DCN # 1700-002
ADDITIONAL UNDERGROUND PIPING

1. PROVIDE ADDITIONAL TRENCH EXCAVATION TO ACCOMODATE ADDITIONAL PIPING SYSTEMS WITH LEACHATE CONVEYANCE PIPING AS HIGHLIGHTED IN THE FOLLOWING DRAWINGS:

92X-5900-G-00251	CIVIL MASTER PLAN
92X-5900-G-00259	CIVIL SECTIONS & DETAILS
92X-5900-G-00261	CIVIL PLAN & PROFILE (SHEET 2 OF 4)
92X-5900-G-00266	CIVIL PLAN & PROFILE (SHEET 3 OF 4)
92X-5900-G-00410	CIVIL MANHOLE & MISCELLANEOUS DETAILS

2. INSTALL THE FOLLOWING ADDITIONAL HDPE PIPING IN TRENCHING WITH 8/4" LEACHATE CONVEYANCE PIPING AS SHOW ON THE DRAWINGS:

- 12" DIAMETER AWWT GROUNDWATER (GW) INFLUENT PIPE
- 10" DIAMETER AWWT GROUNDWATER (GW) EFFLUENT PIPE
- 4" DIAMETER SEWAGE TREATMENT PLANT (STP) EFFLUENT PIPE
- 6" DIAMETER BDN BY-PASS PIPE

TERMINATE SOUTHERN END OF 10" GW EFFLUENT PIPE IN COMMON TRENCH AT GW-10 POINT SHOWN ON DWG. G-00261; CONTINUATION OF THIS PIPING TO INJECTION WELL SURGE TANK TO BE ADDRESSED OUTSIDE THE SCOPE OF THIS DCN.

TERMINATE NORTHERN END OF 6" BDN BY-PASS PIPE IN LEACHATE CONVEYANCE TRENCH APPROXIMATELY 10' NORTH OF AWWT TIE-IN POINTS AS SHOWN ON DWG. G-00266; CONTINUATION OF THE BDN PIPING NORTH TO BE ADDRESSED UNDER DCN 1700-03.

3. EXCAVATE ADDITIONAL TRENCH FOR INSTALLATION OF SOUTHERN END OF 12" GW INFLUENT PIPE FROM MAIN TRENCH TO TIE POINT 1, INSTALL POST INDICATOR VALVE WITH PROTECTIVE 6" PIPE BOLLARDS, AND COMPLETE TIE-IN AT EXISTING 12" UNDERGROUND HDPE GROUNDWATER INFLUENT PIPE.

4.. SAW CUT APPROXIMATELY 40 LINEAR FEET OF EXISTING ASPHALT PAVING FOR TRENCHING TO AWWT TIE POINTS SHOWN ON DETAIL A OF DWG. G-00266. INSTALL DUCTILE IRON PIPE WITH DUCTILE IRON STUB-UPS FROM ALL UNDERGROUND HDPE PIPING TO TIE POINTS AT PIPE RACK. REPAIR PAVEMENT USING 6" REINFORCED CONCRETE. INSTALL 6" DIAMETER PIPE BOLLARDS TO PROTECT STUB-UPS.

5. PERFORM HYDROTESTING ON ALL UNDERDROUND HDPE AND DUCTILE IRON PIPING, BACKFILL AND PERFORM COMPACTION ACTIVITIES.

6. PERFORM GRASS SEEDING ACTIVITIES AT ALL EXCAVATED AREAS.

SOWAUP.001
REV 2/24/97

PARSONS
PAGE 1 of 1
949

4 Mar 97

PO 164 - Leachate Conveyance System
DOC. No.: DCN-008
TRANSMITTAL No.: 1700 - 002
Additional Underground Piping
(Groundwater and AWWT)

RE:	Drawings	(Rev. 0)	92X-5900-G-00251, 00261, 00266
		(PO126)	95X-5900-G-00315, 00316
	Specifications	02667	

Recommend Status B, Approved as noted. Civil comments are as follows:

1. The Leachate Conveyance drawings have been revised (Rev 1) to include the additional underground groundwater and AWWT piping per the scope of work dated 2/24/97. Note however that the GW-10" line extends east of point GW-10 to the Injection Well Surge Tank area and beyond to a point where it turns south away from the Leachate Conveyance Line. This additional line is currently shown on drawings (Rev 1) G00254 and G00261 and in section views on G00259.

2. The referenced PO-164 drawings above are currently Rev 1.

DCN-008 Transmittal: 1700-002 PO-164
Additional Underground Piping February 28, 1997

Comment(s)

1. Confirm that the proposed change has been screened by the PE and that the change is not subject to review under the USQD-like process, the AWWT is covered by a SAR. The Safety Analysis Team has a soils/water representative for this specific area.

Comments by:

M Barringer 03/10/97

SECTION 02667
UTILITY LINES

PART 1 GENERAL

These specifications provide supplemental information for additional utilities that are to be installed in the same trench as the Leachate Conveyance Line Forcemain, a part of the Leachate Conveyance System (Subcontract No. FSC 589). Specification sections from Leachate Conveyance System Specifications, Rev. 0 October, 1996 (LCSS) of that contract are incorporated by reference in this section.

1.1 SECTION INCLUDES

A. HDPE, DIP and Carbon Steel Pipe and fittings for water (DW & FQ), groundwater discharge (GW), reinjection (GW), natural gas (FG), sanitary forcemain (SN) and treatment (CE) underground lines.

Specifications for the leachate line (FT) can be found in the LCSS.

B. Valves and tap connections.

C. Guard posts.

D. Air-relief manholes, frames, and lids.

E. Cleanouts.

1.2 RELATED SECTIONS (These sections are found in the Leachate Conveyance System Specifications, Rev. 0 October, 1996.)

A. Section 01010 - General Requirements.

B. Section 01011 - Submittal Summary.

C. Section 02200 - Earthwork.

D. Section 02215 - Trenching and Backfilling

E. Section 02270 - Erosion and Sediment Control

F. Section 02300 - Boring and Jacking

G. Section 02675 - Disinfection of Water distribution Systems (Supplied with 02667, Not a Part of Leachate Conveyance System Specifications, Rev. 0 October, 1996.)

H. Section 02831 - Chain-Link Fences and Gates

I. Section 02930 - Vegetation.

J. Section 03100 - Concrete.

1.3 REFERENCE DRAWINGS

A. See Section 01012 for the Schedule of Drawings.

1.4 REFERENCES

A. American Society for Testing and Materials (ASTM):

1.	ASTM A36/A36M-96	Carbon Structural Steel.
2.	ASTM A53-96	Standard Specification for Pipe, Steel, Black and Hot Dipped, Zinc Coated, Welded and Seamless.
3.	ASTM A325-96	Structural Bolts, Steel, Heat-Treated, 120/105 ksi Minimum Tensile Strength.
4.	ASTM D3035-95	Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter.
5.	ASTM D3261-95	Standard Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing.
6.	ASTM D3350-96	Standard Specification for Polyethylene Plastic Pipe and Fittings Material.

B. American Water Works Association (AWWA):

1.	AWWA C104/ A21.4-95	Cement-Mortar Lining for Ductile Iron Pipe and Fittings for Water.
2.	AWWA C105/ A21.5-93	Polyethylene Encasement for Ductile-Iron Pipe Systems.
3.	AWWA C110/ A21.10-93	Ductile-Iron and Gray-Iron Fittings, 3-Inch through 48-Inch, for Water and Other Liquids.
4.	AWWA C111/ A21.11-95	Rubber-Gasket Joints for Ductile Iron Pressure Pipe and Fittings.
5.	AWWA C115/ A21.15-94	Flanged Ductile Iron Pipe with Threaded Flanges.
6.	AWWA C150/ A21.50-91	Thickness Design of Ductile Iron Pipe.
7.	AWWA C151/ A21.51-91	Ductile-Iron Pipe, Centrifugally Cast, for Water or Other Liquids.
8.	AWWA C500-93	Metal-Seated Gate Valves for Water Supply Service.
9.	AWWA C550-90	Protective Epoxy Interior Coatings for Valves and Hydrants.
10.	AWWA C600-93	Installation of Ductile-Iron Water Mains and Their Appurtenances.
11.	AWWA C906-90	Polyethylene (PE) Pressure Pipe and Fittings, 4-Inch through 63-Inch, for Water Distribution.

C. American Welding Society, Inc. (AWS):

1.	AWS D1.1-96	Structural Welding Code - Steel.

D. State of Ohio, Department of Transportation (ODOT), Construction and Materials Specifications, January 1, 1995.

E. Steel Structures Painting Council (SSPC):
1. SSPC SP 6-94 Joint Surface Preparation Standard Commercial Blast Cleaning.

F. American Society of Mechanical Engineers (ASME), ASME Code for Pressure Piping, B31:
1. ASME B31.8-92 Gas Transmission and Distribution Piping Systems

1.5 SUBMITTALS

A. Product Data: Provide data on all pipe materials, pipe fittings, valves, accessories, the methods and equipment for HDPE fusion welding, HDPE manholes and manhole frame and cover.

B. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

C. Project Record Documents:
1. Accurately record actual locations by NAD83 coordinates of all underground utilities, piping mains, valves, connections, and invert elevations, and show on as-built drawings.
2. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

D. Shop drawings including spool piece drawings, etc.

E. Pressure testing procedures including cleaning and flushing prior to testing, test equipment, safety precautions, and cleaning after completion of testing.

F. Leak test and examination reports.

E. Project Record Documents:
1. Accurately record actual locations by NAD83 coordinates of all underground utilities, piping mains, valves, connections, and invert elevations, and show on as-built drawings.

2. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

1.6 QUALITY ASSURANCE

A. Piping and Valves: Manufacturer's name and pressure rating marked on valve body and side of pipe.

PART 2 PRODUCTS

2.1 MATERIALS

A. Pipe

1. Ductile Iron Pipe: AWWA C151, Class 55:
   a. Fittings: AWWA C110, Ductile iron cement lined, standard thickness per AWWA C150. All fittings and pipe at valves shall be flanged per AWWA C115.
   b. Jackets: AWWA C105, PE encasement.
   c. Cement Lined: AWWA C104, cement mortar lined.
   d. Joints: AWWA C111, push-on, rubber gasket.
2. HDPE Pipe: AWWA C906 (PE 3408), ASTM D3035, SDR and pressure rating as indicated on drawings.
   a. Fitting: AWWA C906, molded, butt fusion weld to pipe.
   b. Joints: Butt fusion, flanged gasket joints, and molded adapter pipe at interface connections with ductile iron or carbon steel pipe and valves.
   c. Trace Wire: Magnetic detectable conductor, brightly colored plastic covering, imprinted with "water service" in large letters.
3. Carbon Steel: Seamless Carbon Steel, ASTM A53 Grade B, Standard weight, beveled ends
   a. Fittings: Seamless Carbon Steel, Butt weld ends ASTM A234 Grade WPB
   b. Joints: Class 150 Blind, Carbon Steel, ASTM A105, RFSF

B. Gate Valves

1. AWWA C500, iron body, bronze trim, non-rising stem with square nut, single wedge, Class 125 flanged ends, control rod, extension box, and valve key.

C. Bedding Materials

1. Bedding: Fill Type A3 as specified in Section 02200.

D. Post Indicating Valves: Post Indicating Valves Assembly - U.L. listed and FM approved.

1. Sizes 4 inches - 14 inches, AWWA C500 gate valves, flanged ends Class 150, post assembly shall show open and shut, handcrank operator above ground, non-rising stem, and break-flange to separate the top works without removing the valve from the line. PIV operator shall be capable of being locked with a padlock.

E. Guard Posts: Steel pipe, ASTM A53, Schedule 40.

F. Protective Coatings for Valves:

1. Interior - Factory applied heat-cured epoxy coating conforming to AWWA C550.
2. Exterior - Two coats of factory applied zinc chromate primer and two coats finish coating in accordance with metal painting specifications in Article 3.3, Paragraph F.

G. Manhole: HDPE, ASTM D3350. Pipe resin is cell classification 3454-34C and a plastic pipe Institute Rating of PE 3408. The manhole shall have lifting lugs capable of supporting manhole during placement and shipping. The cylinder and outlet shall be fabricated from HDPE pipe with SDR, same as pipe, as indicated on drawings. All components shall be joined by butt fusion, saddle fusion, socket fusion, or extrusion welding. Hot air welding is not acceptable. Each manhole shall be identified by appropriate manhole number and visibly marked on interior and exterior. HDPE molded pipe stubs and ductile iron flanged backup

rings in manholes shall be installed in manhole by shop fabrication.

H. Manhole frame and lid shall be heavy-duty cast iron as noted on the drawings.

I. Air Release Valves:
1. Type: Float and lever operated device for venting air from pipeline.
2. Construction: Cast iron body; stainless steel trim; Buna-N Seat; threaded connections. Body shall be rated for minimum 150 psig.
3. Capacity: Not less than 5 cfm of air at 10 psi differential. Capacities for valves in manholes shall be as shown on the Civil drawings.
4. Manufacturer: APCO, or equal.

J. Air and Vacuum Valves
1. Type: Float operated device for venting or admitting air for pipeline system.
2. Construction: Cast iron body; stainless steel float; Buna-N seat; threaded connections. Body shall be rated for minimum 150 psig. Discharge orifice shall be equal in size to inlet.
3. Inlet connection size shall be as shown on the drawings.
4. Provide air release valve and associated shut-off valve as shown on the drawings.
5. Manufacturer: APCO or equal.

K. Manhole Pipe Supports:
Material used shall meet the following specifications:
1. Structural Steel - ASTM A36.
2. Bolts, Nuts, and Washers - ASTM A325.
3. Welding - AWS D1.1 Class E70XX electrodes.
4. Expansion Anchors: Drilled expansion bolts for securing steel to concrete.
   a. Kwik Bolt, by Hilti, Inc.
   b. Parabolt, by Molly Fastener Group.
   c. Wedge Anchors, by ITW Ramset/Red Head.

2.2 ACCESSORIES

A. Concrete: ODOT Item 499, Class F, 3,000 psi at 28 days. Poured against undisturbed soil or compacted fill.

B. Reinforcing Steel: All reinforcing steel shall meet the requirements of ODOT 709.01, 60 ksi yield grade, deformed billet steel bars, plain finish.

C. Welded Steel Wire Fabric: All welded steel wire fabric shall meet the requirements of ODOT 709.10.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing conditions. Bring any discrepancies to FDF for resolution prior to start of work. Any discrepancies should be brought to FDF's attention in a written statement immediately upon discovery.

B. Verify that service connection and site utility water main size, location, and invert are as indicated.

3.2 PREPARATION

A. Ream pipe and tube ends and remove burrs.

B. Remove scale and dirt on inside and outside before assembly.

C. Excavate pipe trench in accordance with Section 02215 for work of this section. Locate all existing utilities in the area and determine if they will interfere with the proposed utility. Notify FDF if there is an interference.

D. Remove existing pipe to the extent necessary to make new tie ins. Tie-in locations shall be adjusted to conform to field conditions.

3.3 ERECTION/INSTALLATION/APPLICATION

A. Installation - Pipe: Ductile Iron Pipe

1. Maintain separations of piping as shown on drawings.
2. Install pipe to indicated elevation to within tolerance of 5/8 inches at structures.
3. Install ductile iron piping and fittings to AWWA C600. Place polyethylene jacket around all piping exposed to earth in accordance with manufacturer's recommendations.
4. Route pipe in straight line except as shown on drawing.
5. Install pipe to allow for expansion and contraction without stressing pipe or joints as per manufacturer's recommendations.
6. Form and place concrete for thrust blocks at each elbow or change of direction of pipe main.
7. Establish elevations of buried piping as indicated on the drawings.
8. Backfill trench in accordance with Section 02215.

B. Installation - Manhole and Pipe: HDPE

1. Maintain separations of piping as shown on drawings.
2. Install pipe to indicated elevation to within tolerance of 5/8 inches at structures.
3. Install HDPE piping, manholes, and fittings to AWWA C906 (by butt weld fusion method, in accordance with ASTM D3261).
4. Route pipe in line as shown on drawing. The minimum bending radius shall be as specified by the pipe manufacturer. Pipe shall be in a straight route at manhole connections.
5. Install pipe to allow for expansion and contraction without stressing pipe or joints as per manufacturer's recommendation.
6. Form and place concrete for thrust blocks at each molded elbow of pipe main.
7. Establish elevations of buried piping as indicated on the drawings.

8. Install trace wire continuous over top of pipe, 6 inches above pipe line; coordinate with Section 02200.
9. Backfill trench in accordance with Section 02215.
10. Place concrete in and around top of manhole in accordance with Section 03001.

C. Installation of Pipe : Carbon Steel

1. All piping shall be Category D Fluid Service under ASME B31.3.
2. All assembled piping shall be installed without springing, forcing, or cold bending. Cutting or otherwise weakening of structural members to facilitate piping installation shall not be permitted.
3. Piping connections to equipment must ensure that mating flanges are parallel prior to bolt-up and no springing of pipe is required. All equipment nozzle sizes, locations, and flange facings shall be verified prior to pipe fabrication and/or installation.
4. All butt-welded pipe shall be beveled in accordance with ASME B16.25.
5. Branch connection joints shall be prepared to permit full penetration welds of a quality comparable to the circumferential welds in the same piping system.
6. Welding will not be permitted on galvanized carbon steel piping.

D. Installation - Gasline (FG)

1. Gasline shall be installed in accordance with ASME B31.8 Section 842.4 Installation of Plastic Piping and Cincinnati Gas & Electric procedures and guidelines.

E. Installation - Guard Post

1. Excavate for post and concrete in accordance with Section 02200.
2. Hand trim and remove loose material in excavation.
3. Position pipe in hole, maintaining clearances as specified on drawings.
4. Place concrete around and in pipe in accordance with Section 03100.

5. Paint post after concrete cures in accordance with ODOT Item 514.

F. Installation - Post Indicator Valves:
1. Set post indicator valves on solid bearing of concrete.
2. Center and plumb valve box over valve. Set box cover flush with finished grade with a tolerance of +2 inches to -1 inch.
3. Center and plumb indicator post over valve. Indicator post to have plate window to show open and shut position. Indicator post to extend above grade as shown on the drawings.

G. Installation - Air Release and Air and Vacuum Valves:
1. Install valves in manhole per manufactures instructions.

H. Shop and Field Painting Specification:
For Steel Plate and Shapes, Pipe and Fittings
1. Prepare surfaces in accordance with Steel Structures Painting Council (SSPC) SP-6.
2. Prime all bare metal not in contact with concrete/grout with one coat Tnemec Series 6 Epoxo Line Primer. Apply two-coats of Tnemec Series 66 Hi-Build Epoxoline for the finish coat. Follow SSPC Paint 13 and Paint 20.

I. Excess Debris and Waste:
1. Excess debris and waste generated as a result of the work shall be handled by the Subcontractor as described in Part 6, Statement of Work, of the Invitation for Bid.

3.4 FIELD QUALITY ASSURANCE

A. Perform hydrostatic tests on utility lines other than gas (FG) in accordance with AWWA C600. Notify the Construction Manager at least 24 hours in advance of planned testing. Submit report to FDF within 1 week after completion of test.

B. The new pipes shall be hydrostatically tested prior to tie-in. This test shall be run at 50 psi above the operating pressure of the water main and held within specifications for 2 hours.

$$Allowable\ Leakage = \frac{LD\sqrt{p}}{498,168}$$

L = Length of Pipe in Test in Feet
D = Diameter of Pipe in Inches
p = Test Pressure (Operating Pressure + 50 psi = 110 psi + 50 psi)

Answer = Allowable Leakage in Cubic Feet over a 2-Hour Period.

Unless otherwise instructed by FDF, use 110 psi as the operating pressure for testing purposes.

C. Each HDPE manhole shall be hydrostatically tested before installation by the following method:
1. The manhole filled with potable water to within 6 inches of top.
2. Monitor the water level for a 4 hour period. If the level drops 0.5 inches or more over this period, identify leaks and repair. Retest manhole until acceptable and drain.

D. Manhole shall be tested twice; prior to backfill and at completion of backfill.

3.5 CLEANING

A. System Cleaning and Flushing
1. The interior and exterior of all pipe shall be kept clean at all times. Piping shall be free from loose mill scale, sand, dirt, slag, weld spatter, rust, fins, burrs and other foreign matter when erected. Burrs shall be removed by reaming. Other defects shall be removed by machining, chipping, filing, or grinding.

2. After erection and welding of piping, all lines except air shall be flushed with potable water prior to leak testing. Upon completion of flushing, lines shall be drained at all low points.

B. Sandblasted surfaces shall be free of residual quantities of cleaning media such as grit, aluminum oxide, or silicon prior to installation.

C. The use of cleaning fluids containing free chlorine shall be prohibited.

END OF SECTION

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE 949

WP / WO NO.: 1700	S/C NO.: .: FSC-589	Pg 1 OF 1	DATE 2/25/97
S/C TITLE: LEACHATE CONVEYANCE SYSTEM			RCI NO.:
RESPONSIBLE DISCIPLINE: E M (C) OTHER	RCI/DCN TITLE: Biodenitrification Bypass Piping		DCN NO.: 1700-003

DOCUMENTS AFFECTED	DOCUMENT NOS.	REV.	OTHER
PARSONS CFC DRAWING (PO-126) (REFERENCE DCN#1700-002)	#92X-5900-G-00251 #92X-5900-G-00266	0 0	
Biodenitrification System - Forced Main - Lagoon Reactors	#18A-1920-P-00301	1	

RCI - INQUIRY USQD SCREENING BY PROJECT ENGINEER ✓ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

This DCN is written to incorporate approximately 1,000 feet of of six (6) inch HDPE pipe in a common trench excavated for the Leachate Conveyance System. The 1,000 feet of piping is associated with the Biodenitrification Bypass Project. This is part of a collective effort proposed to reduce the overall costs of re-excavating the same trench area. Installation details are outlined in the above referenced DCN #1700-002 and drawings.

REQUESTOR: L. COPELAND	COMPANY: FDF	DATE: 2/25/97	FCE / PE J. C. JENKINS	DATE: 2/25/97

RESPONSE: FOR RCI, IS A DCN REQ'D? NO YES FOR DCN: APPROVED (APPROVED AS NOTED) DISAPPROVED

1) See PARSONS Approved as NOTED Comments Attached Page 1 of 2
2) See additional clarification for other changes occuring with leachate conveyance System (Page 2 of 2 from DCN NO. 1700-010)

PARSONS RCI - DCN ACCEPTANCE

DESIGN ORGANIZATION APPROVAL: Carlton Schroeder 3/9/97	DATE:	CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 5BWD7
(16) FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins		DATE 3/10/97
PERFORMANCE GRADE: 4		
CONSTRUCTION CONCURRENCE: Richard L. Mahurin	DATE: 3/10/97	WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:
PURCHASE REQUISITION REQUIRED: ✓ YES NO		

FS-F-4259 (10/01/96)

DCN 003

received FDF 2-27-97

ORIGINAL

4 Mar 97

PO 164 - Leachate Conveyance System
DOC. No.: DCN-007
TRANSMITTAL No.: 1700 - 003
Biodenitrification Bypass Piping

RE: Drawings (Rev. 0) 92X-5900-G-00251, 00266
(FDF) 18A-1920-P-00301

Recommend Status B, Approved as noted. Civil comments are as follows:

1. The Leachate Conveyance drawings have been revised to include the bypass piping. However, there were two other drawings created which also are included in this effort. The correct list of PARSONS drawings and revision number are as follows:

92X-5900-G-00251	REV 1
92X-5900-G-00266	REV 1
92X-5900-G-00259	REV 0
92X-5900-G-00410	REV 0

FROM DCN NO. 1700-010

(7) Documents AFFECTED:

Drawings

Drawing No.	Sheet No.	Rev. No.	Title	NOTE
92X-5900-X-00264	X0002	1	Drawing Index	WAS REV
92X-5900-G-00251	G0001	1	Civil - Master Plan	WAS REV
92X-5900-G-00254	G0002	1	Civil - Plan and Profile - Sheet 1 of 4	WAS REV
92X-5900-G-00261	G0003	1	Civil - Plan and Profile - Sheet 2 of 4	WAS REV
92X-5900-G-00266	G0004	1	Civil - Plan and Profile - Sheet 3 of 4	WAS REV
92X-5900-G-00262	G0005	1	Civil - Plan and Profile - Sheet 4 of 4	WAS REV
92X-5900-G-00259	G0009	0	Civil - Sections and Details	NEW DWG
92X-5900-G-00410	G0010	0	Civil - Manhole and Miscellaneous Details	NEW DWG

Specifications

Section	Title		
02667	Utility Lines	0 (ADD TO 20110-TS-0002)	NewSpec

(9) Additional Information for Requested/Proposed change:

OU-1 needs to run a fire protection line (FQ-12"), potable water line (DW-6"), sanitary sewer force main (SN-3"), and a gas line (FG-6") from the Waste Pit Area south along a portion of the OSDF Leachate Conveyance Line (WW-4"/8"-B4-1000) corridor/enlarged trench.

OU-5 needs to run the GW-12" influent and GW-10" effluent lines, a CE-6" line for the BDN to AWWT, and modify a FT-4" line from the future STP, and locate them all in a portion of the Leachate Conveyance corridor/enlarged trench.

OU-4 requires tie-in to the potable water, fire protection line, and sanitary sewer force main in the future.

To minimize traffic interference the leachate conveyance line was also realigned north of the SPIT Building.

All of these design changes are reflected in the drawings and specification noted in item (7).

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE 949

(1)WP / WO NO.:	(2)S/C NO.:	(5)Pg	OF	(6)DATE
1700	WISE TASK NO. 269	1	1	12-09-96

(3)S/C TITLE: INSTALL WATERLINES TO OSDF

(11)RCI NO.:

(4) RESPONSIBLE DISCIPLINE: E☐ M☑ C☐ OTHER☐

(4A)RCI/DCN TITLE: CHANGE APING CONFIGURATION

(11)DCN NO.: 1700-004

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
GRID 7	SK-20110-002	0	DCN 1700-001
	SK-20110-003	0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☑ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

MODIFY PIPING/VALVE CONFIGURATIONS PER ATTACHED SKETCHES
SK-20110-002 REV 1
SK-20110-003 REV. 1

(10)REQUESTOR: Tom Sawyer COMPANY: DATE: 12-9-96

(12)FCE / PE: J. C. Jenkins DATE: 12/17/96

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES

(14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

THESE ARE 'AS BUILT' DRAWINGS
J.C.J.

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: J. C. Jenkins DATE: 12/17/96

(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins DATE: 12/17/96

PERFORMANCE GRADE: (17) 4

(18)CONSTRUCTION CONCURRENCE: Tom Sawyer DATE: 12-17-96

PURCHASE REQUISITION REQUIRED: ☐ YES ☒ NO (19)

(21)WORK COMPLETED; (SIGNOFF BY FCE OR PE) Lou Weklitz (J.V.S.) DATE: 12-17-96

FS-F-4259 (10/01/96)

ORIGINAL

000107

949

Page 4 of 4

1700-881

ORIGINAL

COORDINATE ISOLATION WITH UTILITIES

E 54+25

S 14+35

MATCH LINE, SEE DWG. NO. 22C-5500-P-00661, GRID-2

DW-4"

4" PVC 18" BELOW GRADE
(1) WIRE BUNDLE

NEW DW-4" PVC 18" BELOW GRADE

S 14+66

PIV

ST-12"-RCP @ 2.0%

CB 224 — E 53+81, S 14+89
INV. EL. 582.0
ELEV. 585.8

(APPROX.)
E 54+87.3
S 15+04.4

THRUST BLOCK

300'±

POST HYDRANT

THRUST BLOCKS

LOOKING NORTH

12-09-96

N 481,151.40±
E 1,350,870.21±

SK-20110-003
11/5/96
J.C.J.

SK-20110-003 REV1 12-09-96
J.S.

EXIST.

EXIST.

OR

EXIST.

EXIST.

NEW

REPLACE EXIST. 90° ELL. WITH TEE OR INSERT TEE IN EAST WEST RUN.

MATCH LINE, SEE DWG. NO. 93X-5500-C-00310-WTEMP37.DGN

1-4"x4"x2" TEE
4" VALVE & BOX
4" B.F.
2" YARD HYD.
1 THRUST BLK.

22C-5500-P-00662
R/9

949

EMH 226 — E 52+86, S 16+25

000108

949

"F" STREE

ELECT. TRENCH

APPROX. 320' TO TIE POINT

BORE UNDER ROAD

E 58+02
E 1350822
S 30+43
N 479617

NEW DW-4" PVC

~~ROW 42" BELOW GRADE~~

POST HYDRANT

TEE TUNNED NORTH

THRUST BLOCKS

LOOKING NORTH

12-09-96

1-2" YARD HYD.
1-4"x4"x2" TEE
1-4" B.F.
1-THRUST BLOCK

ORIGINAL. Page 3 of 4

1700-001

NORTH ACCESS

949

IE 574.8

30" CONC. CULVERT PIPE

HEADWALL

IE 574.36

E 55+95

SK-20110-002 REV. 1 12-09-96
J.S.

SK-20110-002
11/5/96
J.C.J.

000109

949

REQUEST FOR CLARIFICATION OF INFORMATION/DESIGN CHANGE NOTICE

WP/WO NO.: 1700	S/C NO.: 589	PAGE 1 OF 1	DATE: 1/3/97
S/C TITLE: LEACHATE CONVEYANCE SYSTEM			RCI NO.:
RESPONSIBLE DISCIPLINE: PARSONS			DCN NO.: 1700-005 REV.:

DOCUMENTS AFFECTED	DOCUMENT NOS.	REV.	OTHER
Certified for construction technical specification Subcontract No. FCS 589	Section 02605 Section 03100	0 0	
Parsons CFC Drawing - PO 164 Parsons CFC Drawing - PO-164	92X-5900-G-00261 92X-5900-G-00254	0 0	

☐ RCI - INQUIRY ☑ DCN - JUSTIFICATION, EXISTING CONDITION, & REQUESTED/PROPOSED CHANGE

Existing Conditions: Referenced drawings and specifications provide for the installation of a single, underground double walled HDPE pipe in a trench parallel to the Injection Demonstration pipe line.

Proposed Change: Install the 10" Injection Demonstration pipe line (HDPE and ductile iron) in the same trench as the Leachate Conveyance piping where they have common routing paths. (Maintain 1' separation between pipe lines) All per attached description of work, modified specifications as attached in DCN 1700-002, and attached referenced drawings , 95X-5900-G-00393 and 95X-5900-G-00394, Rev. A.

Justification: The installation of the 10" Injection Demonstration line in the same trench will eliminate having to excavate the same area twice, avoid costly delays due to one contractor impacting on the other, and gain a cost savings on the projects.

REQUESTOR: J.R. Butterfield J R Butterfield 1/3/97

FCE/RE: J.C. Jenkins J C Jenkins 1/6/97

RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES FOR DCN: ☒ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

1) See attached Sheet Page 2 of 2 From DCN 1700-010 for additional inform.

2) See Associated DCN's all Related to Sharing of trench for utilities installation:
   - OU-2 – 1700-010
   - OU-1 – 1695-041
   - OU-4 – 40310-002
   - OU-5 – 1710-003

ENTERED

RCI - DCN ACCEPTANCE

DESIGN ORGANIZATION APPROVAL: Carlton Schroeder 2/21/97

FERMCO PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY)

PERFORMANCE GRADE: 4 James C. Jenkins 2/28/97

CONSTRUCTION CONCURRENCE: Bill Zebich 2/28/97

PURCHASE REQUISITION REQUIRED: ☐ YES ☒ NO

WORK COMPLETED:

ORIGINAL

000110

(7) Documents AFFECTED:

DCN NO. 17900-810-949

Drawings

Drawing No.	Sheet No.	Rev. No.	Title	NOTE
92X-5900-X-00264	X0002	1	Drawing Index	WAS REV
92X-5900-G-00251	G0001	1	Civil - Master Plan	WAS REV
92X-5900-G-00254	G0002	1	Civil - Plan and Profile - Sheet 1 of 4	WAS REV
92X-5900-G-00261	G0003	1	Civil - Plan and Profile - Sheet 2 of 4	WAS Rev
92X-5900-G-00266	G0004	1	Civil - Plan and Profile - Sheet 3 of 4	WAS REV
92X-5900-G-00262	G0005	1	Civil - Plan and Profile - Sheet 4 of 4	WAS REV
92X-5900-G-00259	G0009	0	Civil - Sections and Details	NEW DW
92X-5900-G-00410	G0010	0	Civil - Manhole and Miscellaneous Details	NEW DW

Specifications

Section	Title		NOTE
02667	Utility Lines	0 (ADD TO 20110-TS-0002)	Newsplex

(9) Additional Information for REQUESTED/Proposed change:

OU-1 needs to run a fire protection line (FQ-12"), potable water line (DW-6"), sanitary sewer force main (SN-3"), and a gas line (FG-6") from the Waste Pit Area south along a portion of the OSDF Leachate Conveyance Line (WW-4"/8"-B4-1000) corridor/enlarged trench.

OU-5 needs to run the GW-12" influent and GW-10" effluent lines, a CE-6" line for the BDN to AWWT, and modify a FT-4" line from the future STP, and locate them all in a portion of the Leachate Conveyance corridor/enlarged trench.

OU-4 requires tie-in to the potable water, fire protection line, and sanitary sewer force main in the future.

To minimize traffic interference the leachate conveyance line was also realigned north of the SPIT Building.

All of these design changes are reflected in the drawings and specification noted in item (7).

DESCRIPTION OF WORK - LEACHATE CONVEYANCE SYSTEM / INJECTION DEMONSTRATION COMMON TRENCHING

A review of the pipe routings for the Leachate Conveyance System and the South Plume Optimization and Injection Demonstration Project, showed similar routing paths. To eliminate double excavating the same areas and gain project cost savings by integrating the work, the 4" leachate line and 10" injection supply line will be installed in the same trench where they have similar routing paths.

Description of work:

At point GW1, N. 479164.48 - E. 1348255.20, (see drawing 95X-5900-G-00393 for reference) fuse to end of 10" HDPE pipe approximately 580 additional feet of 10" HDPE SDR11 pipe and install in same trench as the leachate pipe. At point GW4, N. 479028.47 - E. 1348002.23, the 10" HDPE will end in a turned - up 90 degree elbow with flange adapter. Extend from flange adapter a 1 foot long, 10" flanged ductile iron spool CL.55. From the spool piece, extend a 10" ductile iron CL.55 pipe to above grade and end in a blind flange.

At point GW6, N. 479033.15 - E. 1348830.41, the 10" injection supply line will begin again with a blind flange on a 10" ductile iron CL.55 pipe extending below grade to a 1 foot long , 10" ductile iron spool CL.55 flanged connected to a 10", 90 degree HDPE elbow at approximately 3.5 feet below grade. Extend from the elbow in an easterly direction and in the same trench as the leachate pipe, approximately, 880 feet of 10" HDPE SDR11 pipe. At point GW9, N. 478998.15 - E. 1348884.06, fuse into pipe line a 10"x10"x8" HDPE SDR11 tee with flange adapter pointing southwest, and flange connect an 8" PIV valve with blind flange.

At point GW16, N. 478908.05 - E. 1349675.65, (see drawing 95X-5900-G-00394 for reference) the 10" injection supply line will leave the leachate trench and turn south via a 90 degree HDPE SDR11 elbow with flange adapter and blind flange. The change order work will end at this point.

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE 949

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF 2	(6)DATE 1/21/97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E☒ MO☐ CO☐ OTHER☐	(4A)RCI/DCN TITLE: REVISED POLE LOCATIONS		(11)DCN NO.: 1700-006

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
OSDF UTILITY REROUTING - MAIN SITE TELEPHONE FEEDER LINES - LAYOUT	90X-5500-E-00503	1	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE SK-20110-004

- REVISE EASTING COORDINATES AS PER ATTACHED SKETCH 1 TO ENSURE POLES ARE CONSTRUCTED (SET) OUTSIDE OF REROUTED NORTH ENTRANCE ROAD DITCH.

(10)REQUESTOR: J. C. JENKINS COMPANY: DATE: 1/21/97	(12)FCE / PE: DATE: 1/23/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☒ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: DATE: 2/3/97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 2/3/97	
PERFORMANCE GRADE: (17) 4	
(18)CONSTRUCTION CONCURRENCE: DATE: 2/3/97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:
PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)	

FS-F-4259 (10/01/96)

ORIGINAL

000113 SDP 1413

NEW POLE COORDINATES

		EASTING	NORTHING
No CHANGE	OP100	1350887.98	480170.67
No CHANGE	OP101	1350921.93	480315.04
E 1,351,026.50	OP102	1350976.15	480450.70
E 1,351,123.60	OP103	1351073.25	480562.90
E 1,351,228.76	OP104	1351178.41	480668.07
E 1,351,333.95	OP105	1351283.60	480773.24
E 1,351,439.09	OP106	1351388.74	480878.40
E 1,351,544.25	OP107	1351493.90	480983.57
E 1,351,647.65	OP108	1351597.30	481090.35
E 1,351,763.00	OP109	1351727.00	481223.51
E 1,351,763.61	OP110	1351727.61	481357.35
E 1,351,765.17	OP111	1351729.17	481505.70
E 1,351,766.80	OP112	1351730.80	481654.40
E 1,351,768.50	OP113	1351732.50	481803.10
E 1,351,770.15	OP114	1351734.15	481951.82
E 1,351,771.83	OP115	1351735.83	482100.53
E 1,351,773.50	OP116	1351737.50	482249.25
E 1,351,775.20	OP117	1351739.20	482397.96
E 1,351,776.86	OP118	1351740.86	482546.68
E 1,351,778.54	OP119	1351742.54	482695.40
E 1,351,780.21	OP120	1351744.21	482844.11
E 1,351,781.90	OP121	1351745.90	482992.82
E 1,351,783.60	OP122	1351747.60	483141.54
E 1,351,785.25	OP123	1351749.25	483290.25
E 1,351,786.92	OP124	1351750.92	483438.97
E 1,351,788.60	OP125	1351752.60	483587.70
E 1,351,790.28	OP126	1351754.28	483736.40
E 1,351,791.96	OP127	1351755.96	483885.11
E 1,351,790.00	OP128	~~1351768.62~~	484032.70
No CHANGE	OP129	1351840.50	484161.55
No CHANGE	OP130	1351924.20	484284.50
No CHANGE	OP131	1352007.93	484407.40
No CHANGE	OP132	1352091.77	484530.20

SK-20110-004

J.C.J.
1/21/97

DCN No.
1700-006

Page 2 of 2

LEGEND

- ⊙ OSDF TELEPHONE FEEDER POLE (33)
- ⊛ OSDF POWER DISTRIBUTION POLE

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF 2	(6)DATE 1/21/97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM		(11)RCI NO.:	
(4) RESPONSIBLE DISCIPLINE: EX MO CO OTHER	(4A)RCI/DCN TITLE: PIPING SPEC CHANGES	(11)DCN NO.: 1700-007	

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
SPECIFICATIONS	20110-TS-0002	0	
HIGH DENSITY POLYETHYLENE (HDPE) MANHOLES, PIPE, AND FITTINGS	SECTION 02605 ART. 2.04 & 2.05	0	
DESIGN CRITERIA PACKAGE, OSDF OCT. 1996	SECTION 2.5 LEACHATE MGMT.	4	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- VALUE ENGINEERING BY OSDF TEAM (FDF, GEOSYNTEC, PARSONS) CONCLUDED THAT REDUCING SDR'S OF HDPE PIPING WOULD REDUCE MATERIAL COST WHILE STILL MEETING PIPING DESIGN REQUIREMENTS. (SEE ATTACHED LIST)
- REVISED PIPING IS STANDARD MANUFACTURER'S STOCK ITEMS AND SHOULD HAVE NO IMPACT ON DELIVERY.

(10)REQUESTOR: J.C. JENKINS COMPANY: FDF DATE: 1/21/97 (12)FCE / PE: Richard L McKenna DATE: 1/28/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☒ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

Article 2.04 of the technical specification Section 02605 shall be modified and FDF shall obtain all necessary DOE and regulatory agency approvals as required for modification of the Final Design Package and the Design Criteria Package.

① PARSONS - See Clarification Response - Page 1 of 1

② Pipe Wall thickness change may be documented as an AS-BUILT CONDITION

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Rudolph Bonaparte 3 Feb 1997 DATE: (20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: N.A.

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) J.C. Jenkins DATE: 2/5/97

PERFORMANCE GRADE: (17) 4

(18)CONSTRUCTION CONCURRENCE: Richard L McKenna DATE: 2/5/97

PURCHASE REQUISITION REQUIRED: ☐ YES ☐ NO (19)

(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

FS-F-4259 (10/01/96)

Parsons (Carlton Schroeder) approves SDR change as shown on Page 2 of 2 for FORCE Main Carlton Schroeder 1/29/97

DCN 007

received FDHC 2-3-97

ORIGINAL

OU#13

W.O. No.: 1700

DCN No. 1700-00

J.C.J. 949

REVISED HDPE PIPING

LOCATION	SDR
1. FORCE MAIN FROM PERMANENT LIFT STATION TO BSL	
a. 4 IN. CARRIER	17
b. 8 IN. CONTAINMENT	26
2. TEMPORARY GRAVITY LINE FROM LCS MH3 TO PERMANENT L.S.	
a. 6 IN. CARRIER	26
b. 10 IN. CONTAINMENT	26
3. PERMANENT GRAVITY LINES FROM LDS/LCS MH1 TO LDS/LCS MH3	
a. 6 IN. CARRIER	26
b. 10 IN. CONTAINMENT	26

NOTE: HDPE PIPING, FITTINGS AND APPURTENANCES WITHIN ~~LCS~~ LDS/LCS MH's 1, 2, & 3 SHALL ALSO BE SDR 26

ORIGINAL

949

PARSONS

DCN No.: 1700 - 007

29 Jan 97

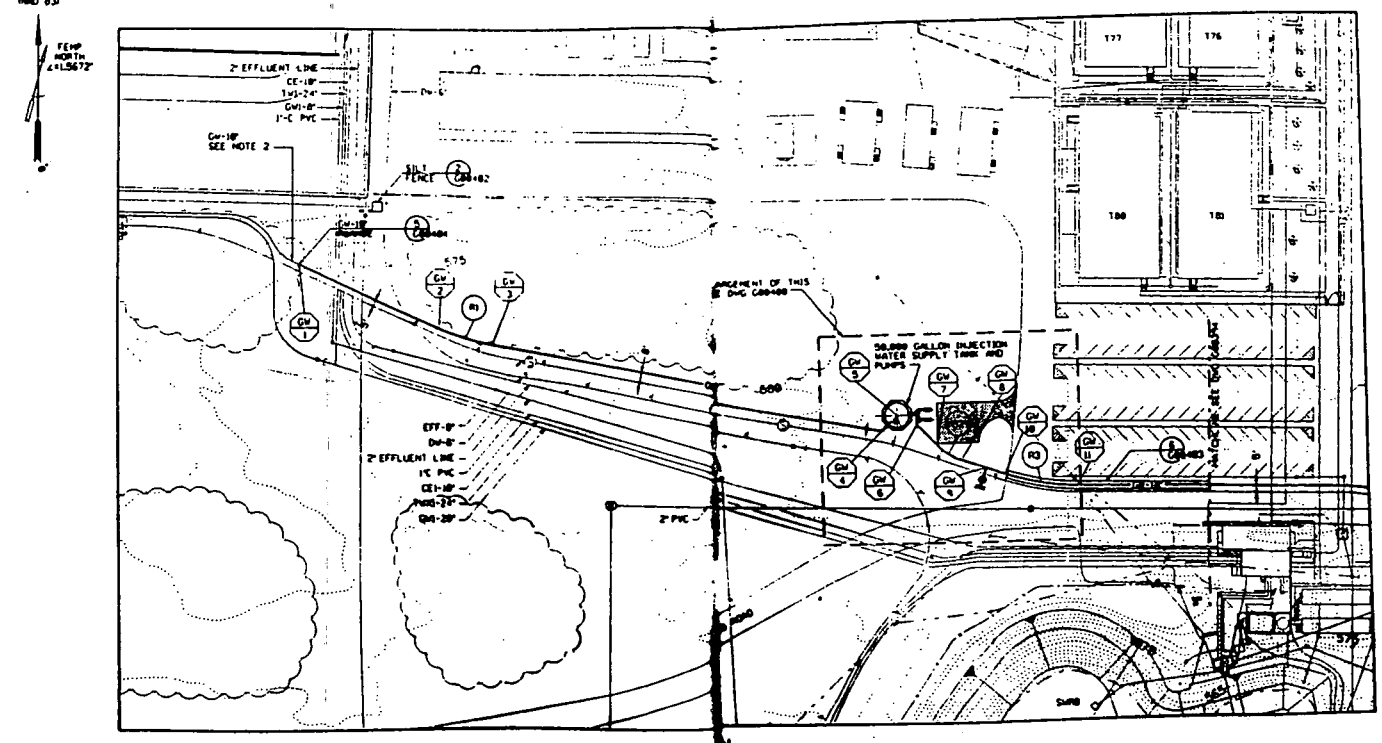
Leachate Conveyance System
Piping Spec Changes

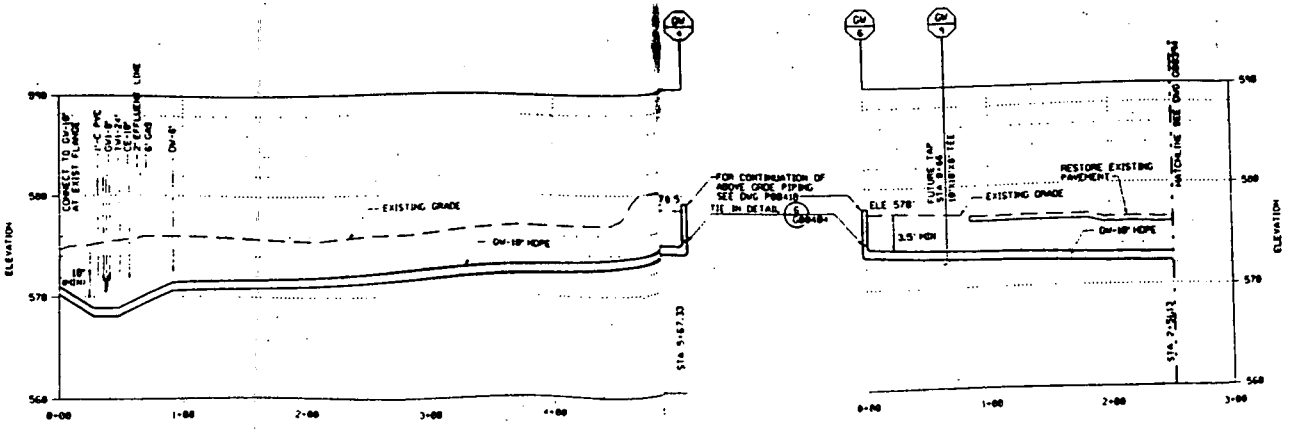
Recommend Status B, Approved as noted

Comments are as follows for the PARSONS drawings only:

1. Confirm that operating parameters will not exceed the operating pressure for the carrier pipe. That is, confirm that there have been no changes to the Rev 0 ~~pump~~ lift station pumping system as designed by PARSONS
2. The change shall be shown on the as-built construction drawings if not incorporated into other DCN changes to plan and profile sheets.

949





PROFILE
SCALE: HOR 1"=40'
VER 1"=5'

NOTES

1. EXISTING CONDITIONS SHOWN ON THIS DRAWING WERE PREPARED FROM FEMP SITE PROVIDED DATA LISTED BELOW:
   EXISTING SITE DATA SOURCE (IN PLANT FILES):
   FEMP CADD/CAD/UTILITY DRAWINGS
   FEMP CONTRACTOR PROJECT DESIGN DOCUMENTS
   PARSONS TOPOGRAPHY, 1992
2. THIS PORTION OF GW-18" WAS BUILT AS PART OF THE ADVANCED WASTE WATER TREATMENT (AWWT) EXPANSION PROJECT (FEMPCO PROJECT NO. 5458).

#479164.48 (AB 113/17

CENTERLINE CURVE DATA

CURVE	RADIUS	LENGTH	DELTA	TANGENT
R1	200.00'	68.42'	17°18'19"	23.32'
R2	56.00'	22.49'	25°47'24"	11.45'
R3	195.00'	68.35'	117°45'36"	38.46'

UNDERGROUND UTILITY COORDINATES

POINT	NORTHING	EASTING	DESCRIPTION
1	[redacted]	1348295.98	[redacted]
2	479[redacted]18.88	1348378.24	BC
3	479[redacted]82.88	1348414.43	EC
4	479[redacted]28.47	1348882.23	90° EL
5	479[redacted]4.93	1348884.93	TANK CENTER LINE
6	479[redacted]3.28	1348936.41	90° EL
7	479[redacted]1.84	1348944.45	BC
8	479[redacted]6.93	1348988.83	EC
9	479[redacted]6.15	1348884.88	TEE
10	479[redacted]2.67	1348988.58	BC
11	479[redacted]6.69	1348994.73	EC

REF DWG NO.	DRAWING TITLE
1231-5900-1-00410	DRAWING INDEX
1231-5900-G-00412	LEGEND AND SYMBOLS
1231-5900-G-00394	PLAN AND PROFILE - SHEET 2 OF 7
1231-5900-G-00480	50,000 GAL TANK ENLARGEMENT
1231-5900-G-00482	DETAILS - SHEET 1 OF 4
1231-5900-G-00484	DETAILS - SHEET 3 OF 4
1231-5900-P-00418	PIPING - PLAN AND SECTION

PRELIMINARY
NOT FOR CONSTRUCTION

A	ISSUED FOR 90% DESIGN REVIEW		NA	

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
SOUTH PLUME OPTIMIZATION AND INJECTION DEMONSTRATION

DRAWING TITLE
CIVIL
PLAN AND PROFILE
SHEET 1 OF 7

DRAWN BY R. LINDER	DATE 10/27/95	CHECKED BY	DATE
REFERENCE NO.	PROJECT	SCALE AS SHOWN	
SUBMITTED FOR APPROVAL	ISSUED FOR APPROVAL NA	FERNALD PROJECT NO. ID-53100	

ARP/P0169	MBS LLLLLJ 00-90701	95X-5900-G-00394	00002	A

949

000123

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF 1	(6)DATE 1/21/97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: EX MO CO OTHER	(4A)RCI/DCN TITLE: LDS/LCS ACCESS COVERS		(11)DCN NO.: 1700-008

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
SPECIFICATIONS	20110-TS-0002	Ø	
MECHANICAL	SECTION 15000 ART. 2.08	Ø	
DRAWINGS 90X-6000-M-00065, 00066 00065, 90X-6000-S-00068		ALL REV.0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- VALUE ENGINEERING BY FDF AND GEOSYNTEC CONCLUDED THAT REVISING MANHOLE & CLEANOUT ACCESS COVERS FOR LDS/LCS M.H.'s 1 THRU 3 FROM 4'x4' & 3'x3' SS TO 3'x3' & 2'x2' ALUM. RESPECTIVELY CAN REDUCE MATERIAL COSTS WHILE STILL MEETING THE REQUIREMENTS FOR ACCESS AND LONGEVITY.

(10)REQUESTOR: J. C. JENKINS	COMPANY: FDF	DATE: 1/21/97	(12)FCE / PE: Richard K McFann	DATE: 1/28/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☒ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

Article 2.08 of the technical specifications Section 15000 and drawing sheets M-4A, M-5A, M-6B, and S-1A shall be modified and FDF shall obtain all necessary DOE and regulatory agency approvals as required for modification of the Final Design Package.

① Provided to Parsons for information only — No signoff's necessary by Parsons (Discussed on 2/10/97)

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE: 3.6.97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: N.A.	
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY)			DATE: 2/5/97
PERFORMANCE GRADE: (17) 4 J.C. Jenkins			
(18)CONSTRUCTION CONCURRENCE: Richard K McFann	DATE: 2/5/97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☐ YES ☐ NO (19)			

FS-F-4259 (10/01/96)

DCN #008 received 2-3-97

ORIGINAL

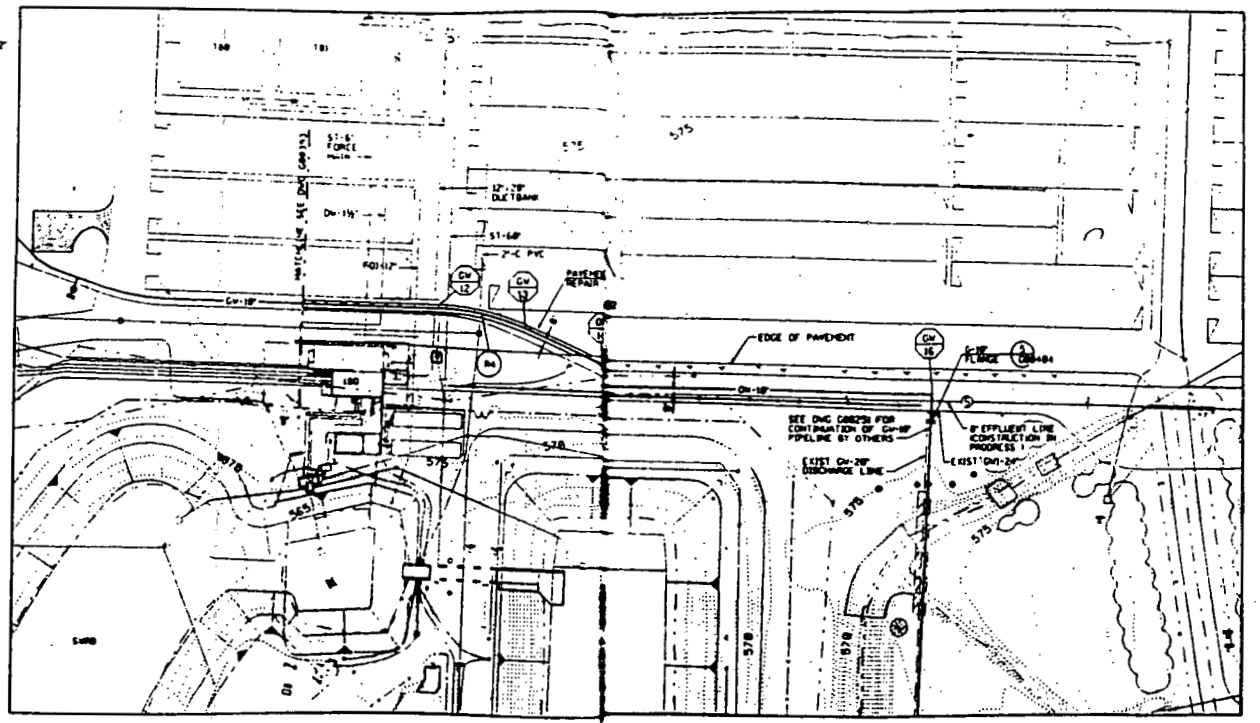
000119

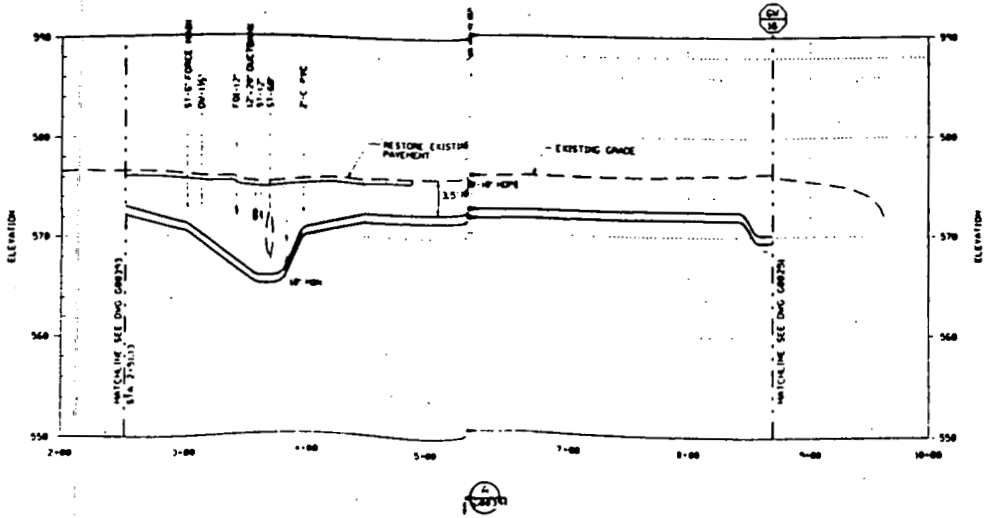
949

0071000

STATE OF OHIO NORTH NAD 83

FEMP NORTH 471,567.2'





PROFILE
SCALE: 1" = 100'-0"
HORIZ.
1" = 20'-0" VERT.

NOTES

1. EXISTING CONDITIONS SHOWN ON THIS DRAWING WERE PREPARED FROM FEMP SITE PROVIDED DATA FROM THE DOCUMENTS LISTED BELOW.

EXISTING SITE DATA SOURCE (IN PLANT FILES):
FEMP FIELD SURVEY (1995)
FEMP CONTRACTOR PROJECT DESIGN DOCUMENTS
PARSONS TOPOGRAPHY, 1992

CENTERLINE CURVE DATA

CURVE	RADIUS	LENGTH	DELTA	TANGENT
R4	200'	75.38'	21°37'48"	38.12'
R5	200'	74.84'	21°26'27"	37.84'

UNDERGROUND UTILITY COORDINATES

POINT	NORTHING	EASTING	DESCRIPTION
12	471[illegible].58	1345[illegible].44	POINT OF CURVE
13	471[illegible].43	1345[illegible].57	POINT OF TANGENT
14	471[illegible].71	1345[illegible].36	POINT OF CURVE
15	471[illegible].48	1345[illegible].24	POINT OF TANGENT
16	471[illegible].85	1345[illegible].65	18" MOLDED ELBOW

REF DWG NO.	DRAWING TITLE
95X-5900-G-00411	DRAWING INDEX
95X-5900-G-00412	LEGEND AND SYMBOLS
95X-5900-C-00393	PLAN AND PROFILE - SHEET 1 OF 7
95X-5900-C-00825	GRADING/SITE UTILITY PLAN - SHEET 1 OF 5
95X-5900-C-00848	DETAILS - SHEET 1 OF 4

PRELIMINARY
NOT FOR CONSTRUCTION

NO.	REVISION	BY	DATE
A	ISSUED FOR 90% DESIGN REVIEW		

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS ENVIR. INC. - ENGINEERING-SCIENCE INC.
CINCINNATI, OHIO

PROJECT NAME
SOUTH PLUME OPTIMIZATION AND INJECTION DEMONSTRATION

DRAWING TITLE
CIVIL
PLAN AND PROFILE
SHEET 2 OF 7

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
A. LINDER	10-27-95				

FILENAME NO.	PLOT	SCALE	SCALE FACTOR
		AS SHOWN	

DRAWING TYP SYMBOL	PROJECT NO.	DRAWING NO.	SHEET NO.
	NA	10-53100	

PROJECT NAME CODE	WBS NO.	TASK/ACTIVITY NO.	DRAWING NO.	SHEET NO.
ARP/PD169	1.2.1.1.1.2.3	00-90701	95X-5900-C-00394	.C0003 A

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF 89	(6)DATE 1/28/97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.: RCK 2/4/97
(4) RESPONSIBLE DISCIPLINE: EX ME CO OTHER	(4A)RCI/DCN TITLE: SURVEYING SPECIFICATION		(11)DCN NO.: 1700-009

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
SPECIFICATION - 20110 TS UC02	20110 TS UC02 SECTION 02100	0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- REVISE SPECIFICATION TO MORE CLEARLY REPRESENT THE SCOPE OF SURVEYING REQUIRED FOR LEACHATE CONVEYANCE (SEE REVISED SPEC. ATTACHED) REV. 1
-

(10)REQUESTOR: J.C. JENKINS	COMPANY: FDF	DATE: 1/28/97	(12)FCE / PE: Richard K. Mahone	DATE: 1/30/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☒ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

Section c.1.c.(1) of the technical specifications shall be modified and FDF shall obtain all necessary DOE and regulatory agency approvals as required for modification of the Final Design Package

SEE ADDITIONAL COMMENT and Suggestions on attached page 1 of 1.

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: GEOSYNTEC: [signature] DATE: 5 Feb 97 PARSONS: Carlton S. Hooker DATE: 10 Feb 97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) PERFORMANCE GRADE: (17) 4 James C. Jenkins	DATE: 2/12/97
(18)CONSTRUCTION CONCURRENCE: Richard K. Mahone DATE: 2/12/97 PURCHASE REQUISITION REQUIRED: ☐ YES ☐ NO (19)	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

FS-F-4259 (10/01/96)

DCN #009

received 2-6-97

ORIGINAL

000162

SECTION 02100

SURVEYING

PART 1 GENERAL

1.01 SCOPE

01 This section describes the requirements for surveying, *including:*

~~1. Establishing temporary control benchmarks.~~

1.2. Establishing a horizontal and vertical project control system based on the existing monuments and surveying required for the layout and construction of the leachate conveyance system.

~~3. Surveys for quantity determinations.~~

~~4. Setting limits and boundaries of construction activities.~~

2.5. ~~Conducting topographic~~ Performing surveys as required to periodically determine amount of work performed for periodic progress payments and final payment prior to Subcontract completion.

3.6. Preparing and furnishing as-built drawings, ~~as specified in Part 4, - Special Terms and Conditions for Construction.~~

1.02 RELATED SECTIONS AND PLANS

A. Section 02110 - Clearing, Grubbing, and Stripping

B. Section 02200 - Earthwork

C. Section 02215 - Trenching and Backfilling

D. Section 02270 - Erosion and Sediment Control

E. Section 02300 - Boring and Jacking

F. Section 02605 - High Density Polyethylene (HDPE) Manholes, Pipes, and Fittings

G. Section 02831 - Chain-Link Fence and Gates

03 Construction Quality Assurance (CQA) Plan.

1.04 REFERENCES

A. National Geodetic Survey Standards.

1.05 QUALIFICATIONS

A. A Land Surveyor licensed in the State of Ohio shall provide oversight. Staking shall be in accordance with accepted surveying practices, provisions herein, and subject to Construction Manager review.

B. Surveying work shall be under the direct supervision of a person who has a least 5 years of experience in construction surveying. Any work performed in referencing or re-establishment of land or United States survey monuments shall be stamped and certified by an Ohio-licensed land surveyor.

1.06 SUBMITTALS

A. Submit the following to the Construction Manager for review within 15 calendar days from Notice to Proceed:
   1. Ohio surveyor's license;
   2. periodic deliverable data (deliver to Construction Manager, as completed, during project):
      a. reduced and checked field notes,
      b. all drawings and sketches, and
      ~~c. electronic files in DXF format or Construction Manager approved electronic files.~~
   3. manner of notation; approved notation shall be consistently applied to all project survey work; the stake marking format and the fieldbook notation shall be compatible.

B. One complete set of as-built ~~(i.e., "record") survey~~ drawings and survey notes certified and stamped by a Surveyor licensed in the State of Ohio shall be submitted to the Construction Manager within 15 days of completion of the project. ~~The Subcontractor shall also provide the Construction Manager with an electronic file in DXF format or a Construction Manager approved electronic file upon final submittal of the record drawings. Three (3) copies of the certified survey record drawings will be required.~~ Drawings shall be the same scale as the construction drawings. Survey notes shall include a point listing with coordinates, elevation, and description.

1.07 PROJECT RECORD DOCUMENTS

A. Maintain on site, a complete, accurate survey log documenting survey work as it progresses.

B. Maintain on-site, a plan clearly showing all site reference points, survey control points, and benchmarks with coordinates.

C. Maintain on-sites an accurate and current set of marked-up drawings showing "as-built" conditions, as specified in Part 4, Special Terms and Conditions for Construction.

~~D. Upon completion of each work item as specified in Part 3, prepare and/or update "as-built" drawing.~~

PART 2 PRODUCTS

2.01 MATERIALS AND SURVEY INSTRUMENTS

A. Provide materials as required to properly perform the surveys, including, but not limited to, instruments, tapes, rods, measures, mounts, and tripods, stakes and hubs, nails, ribbons, other reference markers, and all else as required.

B. Survey instruments shall be calibrated and maintained in accurate calibration throughout the execution of the subcontract. The survey instruments used for this work shall be precise and accurate to meet the needs of the project. All survey instruments should be capable of reading to a precision of 0.001 ft and with a setting accuracy of $\pm$ 0.8 seconds.

PART 3 EXECUTION

3.01 GENERAL

A. Maintain accurate and complete notes of surveys:
   1. Handwritten survey notes and information shall be written with lead pencil(s) and entered in "write-in-rain" notebooks. A copy of the numbered, dated, and signed

field book pages shall be given to the Subcontractor daily for use in checking the work.

2. Electronically collected field survey information shall be collected and backup equipment shall be available in the event of equipment malfunction.
   a. Electronic format for printed output of data collector field survey notes shall be compatible with the approved fieldbook notation format.
   b. Electronic format for printed output of data collector field work shall be compatible with the Subcontractor's and Construction Manager's computer equipment and software for verifying and checking the work. A copy of the data disk shall be submitted to the Construction Manager weekly.

B. During construction of the Leachate Conveyance System, survey notes shall be retained by the Subcontractor and Surveyor. During construction of the Leachate Conveyance System, the Subcontractor and/or Surveyor shall submit surveys to the Construction Manager for review. ~~Prior to the placement of successive soil layers the Subcontractor shall submit a written statement certifying compliance of the preceding layer thickness and grades to the Construction Manager. Surveys will be required from the Subcontractor prior to approval for the placement for overlying materials by the Construction Manager~~.

C. The precision of horizontal and vertical controls shall meet or exceed ~~Third-Order~~ Class II and Third-Order accuracies respectively, as defined by National Geodetic Survey Standards.

D. Conformance check surveys for elevation and for horizontal coordinates shall be recorded to the nearest 0.01 ft and for angles shall be to the nearest 20 seconds.

E. Measurement and payment surveys for elevation and for horizontal distances shall be recorded to the nearest 0.1 ft $\pm$ 0.05 ft.

F. ~~Final~~ "As-built" survey notes and sketches shall be ~~drawings shall be~~ certified for procedure and accuracy of work ~~and sealed~~ by the Land Surveyor.

G. Perform construction layout surveys in advance of scheduled construction activities. At completion of a survey, provide a copy of the field notes, drawings, or sketches to the Construction Manager for review. The Subcontractor shall allow the ~~CQC Consultant and/or~~ Construction Manager one calendar day between Monday through Friday for review and verification of the construction layout. The Subcontractor is responsible for rework and/or construction delays caused by survey or staking errors.

H. Set slope and off-set stakes in accordance with accepted surveying practices.

I. Set grade stakes required for construction activities as the work progresses. Set fine grade stakes on all surfaces for which the plans show a definite grade line.

J. Upon completion of the work, the Subcontractor shall provide the Construction Manager with all original surveying field notes, layouts, and computations ~~and electronic files~~ in standard bound survey notebooks, binders containing electronic file information and two copies each of electronic files compatible with the Construction Manager's computer equipment and software.

K. Protect survey control points. Replace disturbed survey control points at no additional cost.

L. Use only the monuments, coordinates, and elevations recognized by FDF for control points. Temporary control points shall be set based on surveys that reference the accepted monuments.

3.02 SPECIFIC FIELD REQUIREMENTS

A. Establish temporary control points, as necessary, to support construction work activities.

B. Survey Monuments, Accuracy, and Documentation:
   1. Record the following information in survey notebooks for each control point established:
      a. designation of control point;
      b. state planar North American Datum (NAD), 1983 Ohio South;
      c. elevation; feet above Sea Level Datum [Note, Sea Level datum refers to National Geodetic Vertical Datum (NGVD)];
      d. date of establishment;
      e. description and sketch of the control point location; and
      f. control points shall be referenced to a minimum of three features that can be seen from the control point.
      g. field notes for work performed to establish the control point including the coordinates and elevation of the control points referenced.
   2. Document survey work in field notebooks using the format and procedures described below:
      a. title and consecutive number on the front cover;
      b. consecutively numbered pages;

c. table of contents, indicated by survey task, on the first numbered page;
d. legend indicating symbols used in survey notes;
e. names of survey team members for each task;
f. notes on weather, equipment, etc.;
g. date and time on each page to indicate when work was performed;
h. notes in a uniform character such that they can be interpreted and used by anyone with survey knowledge; and
i. description and/or sketches of the existing survey control used.

~~C. Preliminary Surveys:~~

~~1. Clearing Limit Staking: Stake clearing limits according to the minimum limits identified on the Construction Drawings. Clearing limits stakes shall be flagged and the lathe marked "clearing limits".~~

~~2. Alignment and Existing Ground Staking: Following clearing operations and before stripping operations begin, preliminary locations of alignments and/or baseline of project features shall be established. Perform topographic surveys to describe original ground features before stripping or excavation begins. The distance between grid points shall not exceed 50 feet, and all breaks shall be noted.~~

~~3. Earthwork Staking: Staking for cut and fill limits shall establish the exterior limits of excavations and embankments. The maximum staking interval shall be 50 feet. Stakes shall be prominently noted with description of point, vertical distance to design elevation, and offset distance as applicable. A brightly flagged 4 foot lathe shall be provided with each stake. Flagging color will be designated by the Subcontractor.~~

~~D. Final Surveys:~~

~~1. Final topography shall be staked at nominal 50 foot intervals. Additionally, the following points shall be staked and noted as applicable.~~

~~a. Grade breaks.~~

~~b. Points of horizontal curvature and tangency.~~

~~c. Points of stationing equation.~~

~~2. Structures: Stake structure centerlines or building lines so that the orientation, position, limits, and foundation elevation(s) are positively identified. Mark stakes to reflect the design elevation and offset distance as applicable.~~

~~3. Ditches and Channels: Stake ditches and channels such that the layout remains undisturbed during construction.~~

3.03 SURVEYS FOR MEASUREMENT AND PAYMENT

A. Perform surveys to determine quantities of work and percent of completed work.

B. Calculate and certify quantities and submit survey results, calculations, and certification to the Construction Manager for review, evaluation, and payment.

3.04 SURVEYS FOR ~~CONFORMANCE CHECKS AND~~ "AS-BUILT" DOCUMENTS

~~A. Survey the following surfaces to verify the lines and grades achieved during soil placement and compaction:~~

~~1. for berms, ditches, roads, and other earthwork:~~

~~a. original grade surface;~~

~~b. compacted surface of cut slopes; and~~

~~c. finished grade surface;~~

A. Perform ~~conformance check~~ "as-built" surveying immediately upon completion of a given installation to facilitate progress and avoid delaying commencement of the next installation. Provide the following ~~minimum spacings and~~ locations (coordinates and elevations) for survey points:

~~1. surfaces with gradients less than 10 percent, survey on a square grid spaced not wider than 50 ft;~~

~~2. on slopes greater than 10 percent, a square grid spaced not wider than 50 ft shall be used, but in any case, a line at the crest, midpoint, and toe of the slope shall be taken;~~

~~3. a line of survey points spaced not more than 50 ft apart shall be taken along any slope break (this will include the inside edge and outside edge of any bench on a slope);~~

1. ~~4.~~ a line of survey points spaced not more than 50 ft apart or as directed shall be taken at the top of any pipes fittings and valves or other appurtenances;
2. ~~5.~~ pipe terminations as shown on the Construction Drawings;
3. ~~6.~~ at the invert of temporary gravity line cleanouts; and
4. ~~7.~~ at the base and top of the LCS and LDS manholes, and the permanent lift station locations shown on the Construction Drawings. Locations of cleanouts and clean out manholes along the force main shall also be shown.
5. the location, elevation, size, type of material, of all pipes, structures, or other utilities encountered.

DCN - 1700-00

Parsons 949

Page 4 of 9

7 Feb 97

Leachate Conveyance System
DCN No.: 1700 - 009
Surveying Specification

Recommend Status B, Approved as noted. Recommended comments are as follows:

1.06.B Suggest the following rewording :

We want both

"One complete set of survey notes and as-built drawings certified and ~~sealed~~ stamped by a Surveyor licensed in the State of Ohio shall...." (Only the drawings need to be sealed. As written, the notes are to be certified and sealed too.)

Suggest the following be added:

✓ Drawings shall be the same scale as the construction drawings. Survey notes shall include a point listing with coordinates, elevation, and description.

1.07.B ✓ Add "with coordinates." after the word "benchmark".

3.01 Add the following section:

✓ L. Use only the monuments, coordinates, and elevations recognized by FDF for control points. Temporary control points shall be set based on surveys that reference the accepted monuments.

3.02.B.1 Add the following section:

✓ g. Field notes for work performed to establish the control point including the coordinates and elevation of the control points referenced.

3.04.A ✓ 1.a. Locating all pipes every 50 ft. will make a very busy drawing especially with all the lines proposed by OU-1 and 5. Suggest that this be reworded to apply only to the leachate line and the outside line when more than two lines run parallel.

✓ 1.b. Add ",at all tee's, bends, and valves;" after the word "appurtenances".

✓ 4. Suggest adding "...and top...." after the word "base".

✓ 5. Suggest the following new item:

"The location, elevation, size, type of material, of all pipes, structures, or other utilities encountered."

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE - 949

(1)WP / WO NO:	(2)S/C NO.:	(5)Pg OF	(6)DATE
1700	FSC - 589	1 OF 2	2/12/97

(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM — (11)RCI NO.:

(4) RESPONSIBLE DISCIPLINE: E [X] M [ ] C [ ] OTHER [ ] — (4A)RCI/DCN TITLE: ADD/ADJUST UTILITIES — (11)DCN NO.: 1700-010

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
SEE ATTACHED PAGE	2 OF 2		

(9)[ ] RCI - INQUIRY [ ] USQD SCREENING BY PROJECT ENGINEER (9)[X] DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- VALUE ENGINEERING BY FDF determined that additional utilities required for other projects could be installed in an enlarged trench for the leachate conveyance pipeline.
- SEE ATTACHED PAGE 2 of 2 for Additional Requested/PROPOSED CHANGE

(10)REQUESTOR: Carlton Schroeder COMPANY: Parsons DATE: 2/12/97 — (12)FCE / PE: Richard L McGuire DATE: 2/12/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? [ ] NO [ ] YES (14)FOR DCN: [X] APPROVED [ ] APPROVED AS NOTED [ ] DISAPPROVED

SEE ASSOCIATED DCN'S :

OU-1 - 1695-041
OU-5 - 1710-003
OU-4 - 40310-002

PARSONS RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder DATE: 2/12/97 — (20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 2/12/97 ~~2/24/97~~

PERFORMANCE GRADE: (17) 4 — James C. Jenkins

(18)CONSTRUCTION CONCURRENCE: Richard L McGuire DATE: ~~2/24/97~~ — (21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

PURCHASE REQUISITION REQUIRED: [X] YES [ ] NO (19) ~~2/24/97~~

FS-F-4259 (10/01/96)

9cg ORIGINAL

INC 2/13/97

CANCELLED

000130

DCN NO: 1700-010

949

(7) Documents AFFECTED:

Drawings

Drawing No.	Sheet No.	Rev. No.	Title	NOTE
92X-5900-X-00264	X0002	1	Drawing Index	WAS REV
92X-5900-G-00251	G0001	1	Civil - Master Plan	WAS REV
92X-5900-G-00254	G0002	1	Civil - Plan and Profile - Sheet 1 of 4	WAS REV
92X-5900-G-00261	G0003	1	Civil - Plan and Profile - Sheet 2 of 4	WAS REV
92X-5900-G-00266	G0004	1	Civil - Plan and Profile - Sheet 3 of 4	WAS REV
92X-5900-G-00262	G0005	1	Civil - Plan and Profile - Sheet 4 of 4	WAS REV
92X-5900-G-00259	G0009	0	Civil - Sections and Details	NEW DWG
92X-5900-G-00410	G0010	0	Civil - Manhole and Miscellaneous Details	NEW DWG

Specifications

Section	Title	
02667	Utility Lines	0 (Add to 20110-TS-0002) (New Spec)

(9) Additional Information for REQUESTED/Proposed change:

OU-1 needs to run a fire protection line (FQ-12"), potable water line (DW-6"), sanitary sewer force main (SN-3"), and a gas line (FG-6") from the Waste Pit Area south along a portion of the OSDF Leachate Conveyance Line (WW-4"/8"-B4-1000) corridor/enlarged trench.

OU-5 needs to run the GW-12" influent and GW-10" effluent lines, a CE-6" line for the BDN to AWWT, and modify a FT-4" line from the future STP, and locate them all in a portion of the Leachate Conveyance corridor/enlarged trench.

OU-4 requires tie-in to the potable water, fire protection line, and sanitary sewer force main in the future.

To minimize traffic interference the leachate conveyance line was also realigned north of the SPIT Building.

All of these design changes are reflected in the drawings and specification noted in item (7).

ORIGINAL

DESCRIPTION OF WORK - LEACHATE CONVEYANCE SYSTEM / INJECTION DEMONSTRATION COMMON TRENCHING

A review of the pipe routings for the Leachate Conveyance System and the South Plume Optimization and Injection Demonstration Project, showed similar routing paths. To eliminate double excavating the same areas and gain project cost savings by integrating the work, the 4" leachate line and 10" injection supply line will be installed in the same trench where they have similar routing paths.

Description of work:

At point GW1, N. 479164.48 - E. 1348255.20, (see drawing 95X-5900-G-00393 for reference) fuse to end of 10" HDPE pipe approximately 580 additional feet of 10" HDPE SDR11 pipe and install in same trench as the leachate pipe. At point GW4, N. 479028.47 - E. 1348002.23, the 10" HDPE will end in a turned - up 90 degree elbow with flange adapter. Extend from flange adapter a 1 foot long, 10" flanged ductile iron spool CL.55. From the spool piece, extend a 10" ductile iron CL.55 pipe to above grade and end in a blind flange.

At point GW6, N. 479033.15 - E. 1348830.41, the 10" injection supply line will begin again with a blind flange on a 10" ductile iron CL.55 pipe extending below grade to a 1 foot long , 10" ductile iron spool CL.55 flanged connected to a 10", 90 degree HDPE elbow at approximately 3.5 feet below grade. Extend from the elbow in an easterly direction and in the same trench as the leachate pipe, approximately, 880 feet of 10" HDPE SDR11 pipe. At point GW9, N. 478998.15 - E. 1348884.06, fuse into pipe line a 10"x10"x8" HDPE SDR11 tee with flange adapter pointing southwest, and flange connect an 8" PIV valve with blind flange.

At point GW16, N. 478908.05 - E. 1349675.65, (see drawing 95X-5900-G-00394 for reference) the 10" injection supply line will leave the leachate trench and turn south via a 90 degree HDPE SDR11 elbow with flange adapter and blind flange. The change order work will end at this point.

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE

WP / WO NO	S/C NO.	PG / OF	DATE
1700	589	1 / 1	2-18-97

S/C TITLE: LEACHATE CONVEYANCE SYSTEM

RCI NO.: 1700-005R

RESPONSIBLE DISCIPLINE: E ☒ M ☐ C ☐ OTHER ☐

RCI/DCN TITLE: HEAT TRACE GFI C.B.

DCN NO.: 1700-012

DOCUMENTS AFFECTED	DOCUMENT NOS.	REV.	OTHER
92x-5900-E-00323		0	
92x-5900-E-00325		0	

☐ RCI - INQUIRY ☐ PRE-SCREEN FOR USQD BY PROJECT ENGINEER ☒ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

The above drawings call for installing a 20A/1P 30ma GFI C.B. in the existing 120V panel. The panel is an ITE/Siemens panel that accepts a BQ type C.B. which is a bolt-in breaker. ITE/Siemens does not make a 30ma GFI C.B. in that style of frame & their 30ma GFI C.B. does not fit in that type of panel.

Proposed Change: Install a 20A/1P 5ma GFI C.B. BQ; bolt-in type, in lieu of 30ma.

REQUESTOR: P. FRAIST — COMPANY: B&J ELEC. — FCE / PE: J. C. Jenkins — 2/24/97

RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☒ YES — FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See PARSONS [redacted] CHANGE PAGE 1 of 1 — 5 SHTS.

2) Record changes with AS-BUILT Documentation

PARSONS — RCI - DCN ACCEPTANCE

DESIGN ORGANIZATION APPROVAL: Carlton Schroder 3/7/97

CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5

FERMCO PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins 3/10/97

PERFORMANCE GRADE: 4

CONSTRUCTION CONCURRENCE: Richard L. McClure 3/10/97

PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO

WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

FS-F-4259 (03/15/96)

ORIGINAL

received 2-25-97

DCN-012

000133

DOCUMENT REVIEW COMMENT SHEET

SME/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 3/6/97
DOCUMENT NO. AND TITLE: LEACHATE CONVEYANCE SYSTEM FDF DCN 1700-012		DATE COMMENTS DUE:
REQUEST NO.:		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC /	COMMENT RESOLUTION
1	T. Ferrell		5#mA GFCI breakers are not acceptable*. Must a 30 mA GFCI		
			breaker in a NEMA 3R or 4 enclosure ~~and~~ TF adjacent to the		
			panel. TF ~~recommendations~~ information and manufacturer's		
			*Code HANDBOOK/Recommends larger 30mA GFCI (See Attachment)		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

0004134

FLORIDATA(08) 3UN-32\FILE3\VOS\Word

949

427-19. Electrical Connections.

(a) Nonheating Interconnections. Nonheating interconnections, where required under thermal insulation, shall be made with insulated connectors identified as suitable for this use.

(b) Circuit Connections. Splices and terminations outside the thermal insulation shall be installed in a box or fitting in accordance with Sections 110-14 and 300-15.

427-20. Marking. Each factory-assembled heating unit shall be legibly marked within 3 in. (76 mm) of each end of the nonheating leads with the permanent identification symbol, catalog number, and ratings in volts and watts, or in volts and amperes.

427-21. Grounding. Exposed noncurrent-carrying metal parts of electric heating equipment that are likely to become energized shall be grounded as required in Article 250.

427-22. Equipment Protection. Ground-fault protection of equipment shall be provided for each branch circuit supplying electric heating equipment.

Exception: In industrial establishments where conditions of maintenance and supervision ensure that only qualified persons will service the installed systems and continued circuit operation is necessary for safe operation of equipment or processes. Alarm indication of ground-fault shall be required.

The words "not having a metal covering" have been removed from Section 427-22 for the 1996 *Code*. This section now requires ground-fault protection of equipment for all branch circuits supplying equipment of this type. A new exception was also added to the 1996 *Code*. This exception applies to industrial establishments where continued circuit operation is required for safe operation of equipment or processes and an alarm system indicating ground faults is installed.

The level of ground-fault protection provided by Class A GFCIs, which are normally used for personnel safety, is 5 milliamperes (± 1 milliampere). This level may not be practical for an application where capacitive-type leakage, such as on long runs of heat-tracing cable, may be encountered. The intent of this section is to minimize the possibility of fire by providing equipment ground-fault protection as defined in Article 100, and to provide a degree of personnel safety by rapidly de-energizing a circuit that has developed a ground fault. This may be provided by a Class B GFCI, which trips at a higher level.

427-23. Metal Covering. Electric heating equipment shall have a grounded metal covering in accordance with (a) or (b) below. The requirements of this section shall become effective July 1, 1996.

This requirement has been changed for the 1996 *Code* and now requires a grounded metal covering on all heaters. It is intended to provide a path to ground for fault current, in order to trip phase or ground-fault protective d thus reducing the potential for fire and electric shock. metal covering will also provide added mechanical pro tion of the heating cable or panel. This requirement bec effective July 1, 1996.

(a) Heating Wires or Cables. Heating wires or cable have a grounded metal covering that surrounds the heati ment and bus wires, if any, and their electrical insulation

(b) Heating Panels. Heating panels shall have a gro metal covering over the heating element and its electrical i lation on the side opposite the side attached to the surfa be heated.

The metal covering shall provide an effective ground

D. Impedance Heating

427-25. Personnel Protection. All accessible external su of the pipeline and/or vessel being heated shall be ph guarded, isolated, or thermally insulated (with weatherpro for outside installations) to protect against contact by pe in the area.

427-26. Voltage Limitations. The secondary windi isolation transformer (Section 427-27) connected to the or vessel being heated shall not have an output voltage than 30 volts ac.

Exception: The voltage shall be permitted to be greate volts but not more than 80 volts if a ground-fault circuit-i for personnel protection is provided.

See commentary following Section 427-22.

427-27. Isolation Transformer. A dual-winding tran with a grounded shield between the primary and secondary ings shall be used to isolate the distribution system from the ing system.

427-28. Induced Currents. All current-carrying comp shall be installed in accordance with Section 300-20.

427-29. Grounding. The pipeline or vessel, or both heated that is operating at a voltage greater than 30 but no than 80 shall be grounded at designated points.

427-30. Secondary Conductor Sizing. The ampacity conductors connected to the secondary of the transform be at least 100 percent of the total load of the heater.

E. Induction Heating

427-35. Scope. This part covers the installation of fixed quency induction heating equipment and accessories for lines and vessels.

Note from "Nat'l. Elect. Code Handbook" published by NFPA

000135

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE 949

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF 2	(6)DATE 4/16/97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E☒ MD CD OTHER☐	(4A)RCI/DCN TITLE: ALIGNMENT CHANGE FT-38 TO BSL		(11)DCN NO.: 1700-013

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
42X-5980-G-00262		0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- ON-1 ADDED A GRAVEL ROAD ALONG ALIGNMENT NEAR FT-38. NEW ROAD CHANGED EXISTING TOPO.
- BEST TO GENERALLY MOVE ALIGNMENT WEST FROM ORIGINAL LOCATION.
- NEW ALIGNMENT IS OFF ROAD AND ON NEW LEVEL GRADED AREA
- SEE SKETCH 20110-SK-006

(10)REQUESTOR: C. JENKINS COMPANY: FDF DATE: 4/17/97	(12)FCE / PE James C. Jenkins DATE: 4/17/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☒ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons attached Comment Page 1 of 1

2) Record AS-BUILT CONDITIONS

(PARSONS) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder DATE: 4/18/97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins DATE: 4/21/97	
PERFORMANCE GRADE: (17) 4	
(18)CONSTRUCTION CONCURRENCE: Richard L Mallone DATE: 4/21/97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:
PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)	

FS-F-4259 (10/01/96)

ORIGINAL

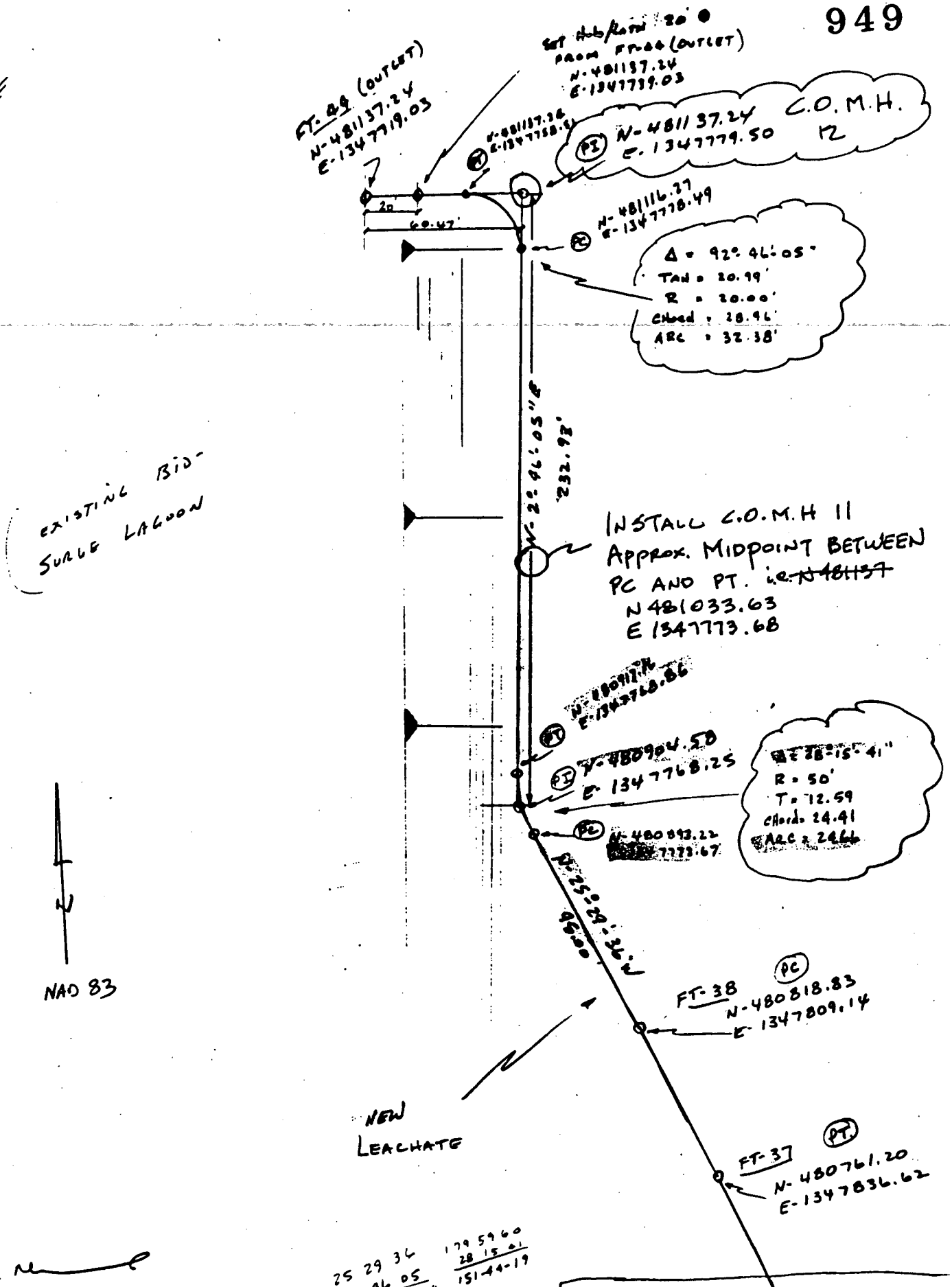
DCN 013

received 4-8-97

000136

ENTERE

NEW LEACHATE RELOCATION



25 29 34
2 46 05
28° 15' 41"

179 59 60
28 15 41
151 44 19

4-14-97

SKETCH 20110-SK-006

000137 4/16/97 J.C.V.

TCH 1700-013 Page 2 of 2

DOCUMENT REVIEW COMMENT SHEET

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 4/18/97
DOCUMENT NO. AND TITLE: ALIGNMENT CHANGE FT-38 TO BSL DCN-013		DATE COMMENTS DUE:
REQUEST NO.: Leachate Conveyance System		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC 1	COMMENT RESOLUTION
1	Y. AFSHAR		PROVIDE A MOLDED WYE AT THE PT OF THE 20.FT RADIUS CURVE BY THE CONN. #12.		
			4/21/97 We are not using the 20ft. Radius. CO. MH #12 remains No need for wye as indicated JCG		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

000438

949

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF 2	(6)DATE 3/3/97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: EX MO CO OTHER	(4A)RCI/DCN TITLE: FORCE MAIN CLEANOUTS		(11)DCN NO.: 1700-014

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
DRAWINGS 92X-5900-G-00254, 00262, 00266 e/l		1	
DRAWINGS 92X-5900-G-00261, 00255, 00258 R/O	G261 R/O	10	
DRAWING 92X-5900-N-00322		0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- ALL C.O.'s ARE HOUSED IN MANHOLES WITH ACCESS FRAMES & COVERS
- PROPOSE TO ELIMINATE ALL C.O. MANHOLES EXCEPT NOS. 1, 4, 5, & 11 AND REPLACE WITH CLEANOUT AS SHOWN ON ATTACHED SKETCH SK-20110-005. CARBON STEEL PIPING AND APPURTENANCES ARE ALSO DELETED FROM THE REPECTIVE MANHOLES.
- CHANGE SDR OF M.H.'s 1, 4, 5, AND 11 FROM 32.5 TO 26 TO EXPEDITE DELIVERY.

(10)REQUESTOR: J.C. JENKINS COMPANY: FDF DATE: 3/3/97	(12)FCE / PE: Richard L. McMinn DATE: 3/4/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Additional Parsons Comments
2) Record changes with AS-Built Documentation

97 MAR 11 AM 10:44

PARSONS — RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder DATE: 3/10/97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: PERFORMANCE GRADE: (17) 4 James C. Jenkins 3/10/97	
(18)CONSTRUCTION CONCURRENCE: Richard L. McMinn DATE: 3/10/97 PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

FS-F-4259 (10/01/96)

DCN 014

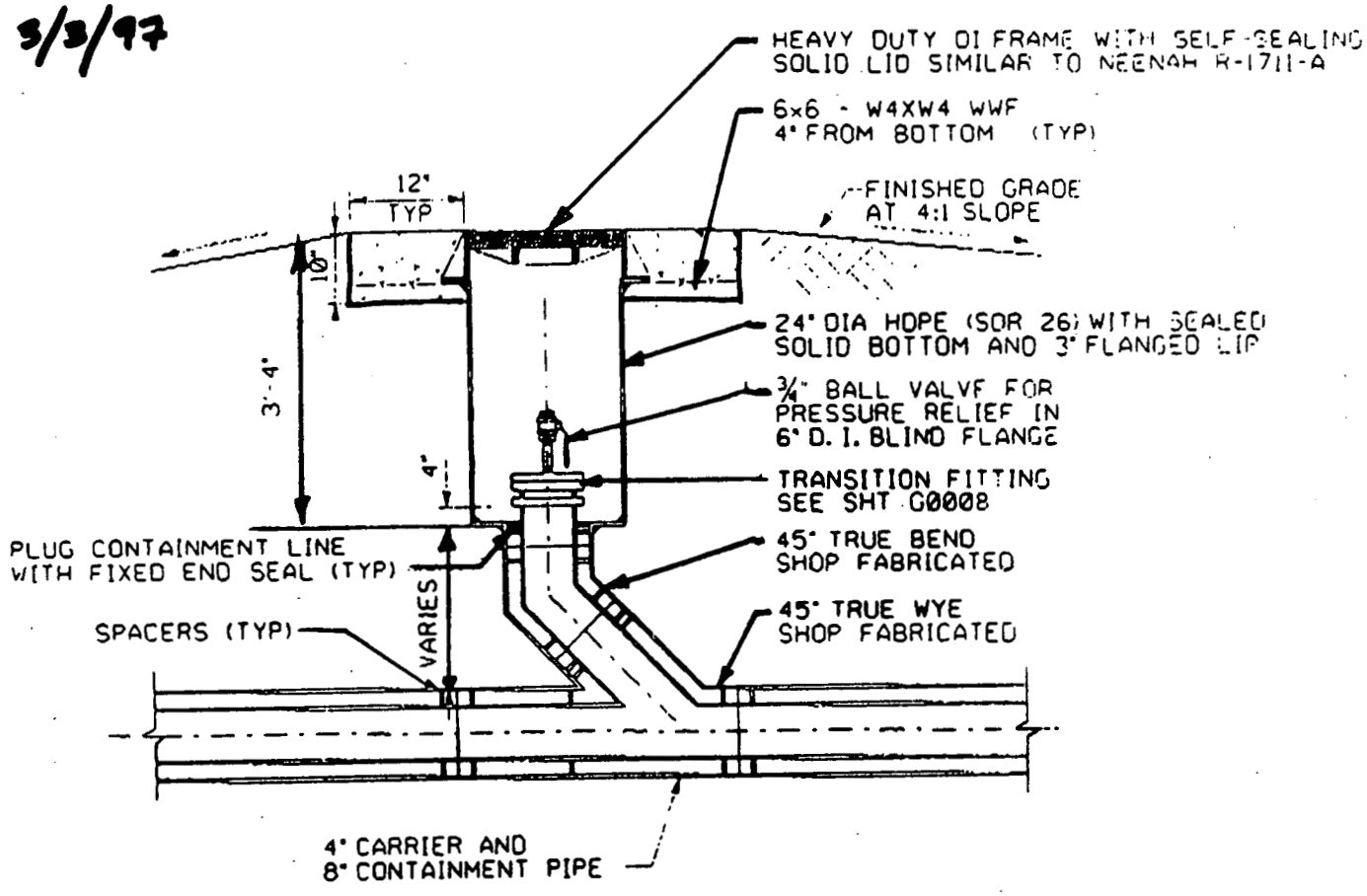
received 3-5-97 DCN-010

ORIGINAL

ENTERED

OCN 1700-~~01~~ SHT. 2 OF 2
LEACHATE CONVEYANCE SYSTEM

SK-20110-005
3/3/97



CLEANOUT DETAIL

NTS

REF
G00254
G00261
G00266
G00262
G00258

- CLEANOUT ASSEMBLIES SHALL BE SHOP FABRICATED. ALLOW FOR FIELD CONNECTION TO PIPELINE.
- THE DIMENSION FROM TOP OF FRAME TO TOP OF CONTAINMENT PIPE VARIES FOR EACH CLEANOUT.
- INSTALL CLEANOUT ON LATERAL FOR COMH 10 AND COMH 12 LOCATIONS. USE ALL 4"/8" HDPE PIPE, BEND, AND WYE SIMILAR TO THE TYPE 3 PLAN ON DWG G00258.

R92g00258.m po164@ws404. Mon Mar 3 10:17:26 EST 1997

ORIGINAL

Parsons
Sheet 1 of 2

949

10 Mar 97

PO 164 - Leachate Conveyance System
DCN No.: 1700 - 010
Force Main Cleanouts

RE: Drawings (Rev. 1) 92X-5900-G-00254, 00261, 00266, 00262
(Rev. 0) 92X-5900-G-00255, 00258
SK-20110-005 dtd 3/3/97

Recommend Status B, Approved as noted. Civil comments are as follows:

1. The clean out man holes (COMH) were to provide a means of detecting leaks in the carrier pipe. The reduction in COMH's will mean that much more leakage will occur before it is detected and it will be harder to locate the area of the leak.

DOCUMENT REVIEW COMMENT SHEET

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 03/10/97
DOCUMENT NO. AND TITLE: FORCE MAIN CLEANOUTS		DATE COMMENTS DUE: 03/10/97
REQUEST NO.: DCN-010 TRANSMITTAL 1700-014		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT ~~CLASSIFICATION~~	SRC 1	COMMENT RESOLUTION
1	M. BARRINGER	1	CONFIRM W/ FDF SAFETY ANALYSIS THAT CHANGE IS ACCEPTABLE IN POTENTIAL INCREASE ~~FOR~~ IN LEAK DURATION ~~BETWEEN~~ AND RESULTANT RELEASE		TEAM FOR SOILS/WATER

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

DOE/RL-96-42

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.:	(2)S/C NO.:	(5)Pg 1 OF 12	(6)DATE
1700	589		03/18/97

(3)S/C TITLE: Leachate Conveyance System — (11)RCI NO.:

(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☐ OTHER☐ — (4A)RCI/DCN TITLE: Delete Electrical Feeder to Trailers — (11)DCN NO.: 1700-015

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Leachate Conveyance System, 480 V. Feed to OSDF Trailers & Permanent Lift Station	90X-5500-E-00504	0	
Leachate Conveyance System, 480 V. Feed to OSDF Trailers & Permanent Lift Station	90X-5500-E-00505	0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☑ DCN - JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

The current scope for the Leachate Conveyance System project called for the LCS contractor to install 480 V. overhead electrical service to five (5) future OSDF trailers, located directly south of existing trailers T-82 and T-83.

Per direction by the FC&DP Land Use Group (see attached cc:Mail from Pat Patel, dated 2/18/97, re: Revised Layout; Contractor Trailers for "OSDF" Activities), any new trailers for OSDF are to use space vacated by trailers removed from the "east trailer area", located west of T-82 and T-83. This negates the need for new 480 V. service since these spaces already have electrical service. The attached sheets (11 pages) identify electrical equipment and material deletions resulting from this change. The 480 V. feeder for the permanent lift station will remain unchanged.

(10)REQUESTOR:	COMPANY:	DATE:	(12)FCE / PE	DATE:
Richard L. McGuire	Fluor Daniel Fernald	3/24/97	James C. Jenkins	3/25/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

FDF (SPRINGDALE) J. KERL RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
James E. Kerl	3-26-97	2 CUP 5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 3/27/97

PERFORMANCE GRADE: (17) 4 James C Jenkins

(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
Richard L McGuire	4/2/97		

PURCHASE REQUISITION REQUIRED: ☑ YES ☐ NO (19)

FS-F-4259 (10/01/96)

ORIGINAL

FILE

000143

Author: Pat Patel at FNST-02
Date: 2/18/97 3:18 PM
Priority: Normal
TO: Don Goetz at FNST-03
TO: Rick Mcguire at FNST-03
TO: Michael Hickey
CC: Joe Neyer at FEST-01-A
CC: Wayne Pasko at FEST-01-A
CC: Todd Clark
CC: Steven Houser
CC: Lyle Hampshire
CC: Linda K Rogers at FNST-05
CC: Paul Disney at FEST-01-A
CC: Raymond Reinhart at FNST-05
CC: Todd Trammel at FNST-05
CC: Pat Patel
CC: Steve Wentzel at FNST-05
CC: Woodrow Jameson
CC: Vaughn Furlong at FNST-04
CC: Alvin Westerman at FNST-04
Subject: REVISED LAYOUT; CONTRCTOR TRAILERS FOR "OSDF" ACTIVITES.
---------- Message Contents ----------

Don / Rick and Mike:

In process to coordinate the revised layout for the Contractor Trailers for the "OSDF" activities as proposed by you recently, which has been turned down by our client DOE for the following reasons.

i) Use the space vacated by the trailers removed from the "EAST TRAILER AREA" for the OSDF support activity, in lieu of the proposed Gravel Construction Area / Trailers. (Use Existing Trailer spots and Utilities)

ii) Power, Communications, and bathroom facilities, etc. are available within East Trailer Area. No need to run separate poles and power for the proposed trailers.

iii) The proposed layout shall require additional fencing and gate as it looses the site between existing / established check points. (Security Issue)

iv) The fence, which is removed to pull out the existing trailers from the East Trailer Area shall remain down.

Please coordinate above input in your planning and resubmit final trailer location for the "Master Plot Plan" and Land Use Authority processing.

Thanks,

Pat.

ORIGINAL

EXHIBIT F

* 480 Volt Feed ~~To On Site Disposal Facility Trailers And~~ Permanent Lift Station. Page 1 of 8. 10/21/96 (1)

* Power Distribution Center #2. Page 2 of 8. 10/21/96

(1) * ~~On Site Disposal Facility Trailer Transformer. Page 3 of 8. 10/21/96~~

* 480 Volt Feed To Permanent Lift Station Page 4 of 8. 10/21/96

(1) * ~~Typical Trailer Feed. Page 5 of 8. 10/21/96~~

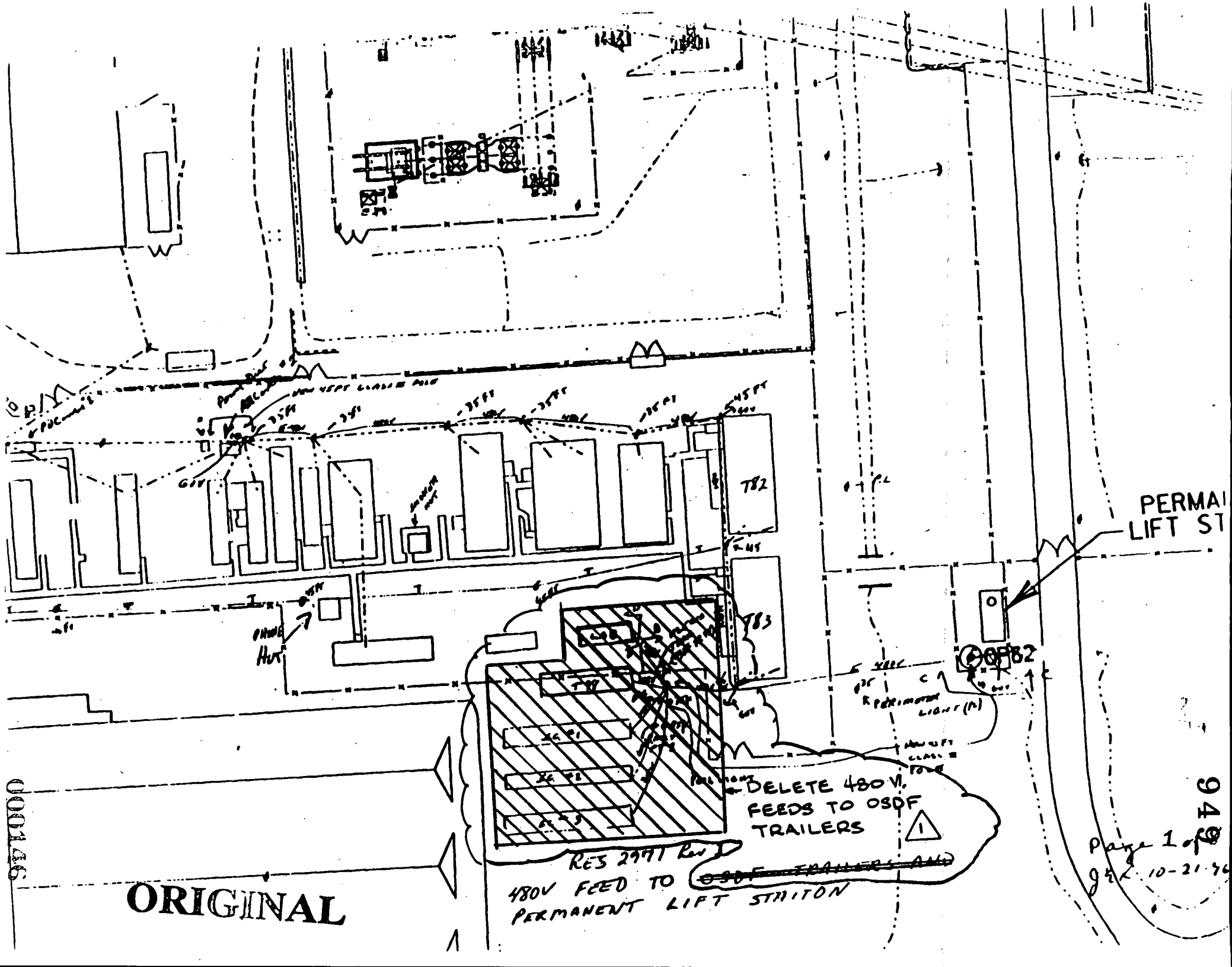
* Messenger Attachment (Typical). Page 6 of 8. 10/4/96

* Guy Wire Detail. Page 7 of 8. 10/21/96

(1) * ~~Electrical Power And Telephone Service, Trailer Standard Elevation And Details. Page 8 of 8. 10/21/96~~

(1) Revised 3/17/97

ORIGINAL

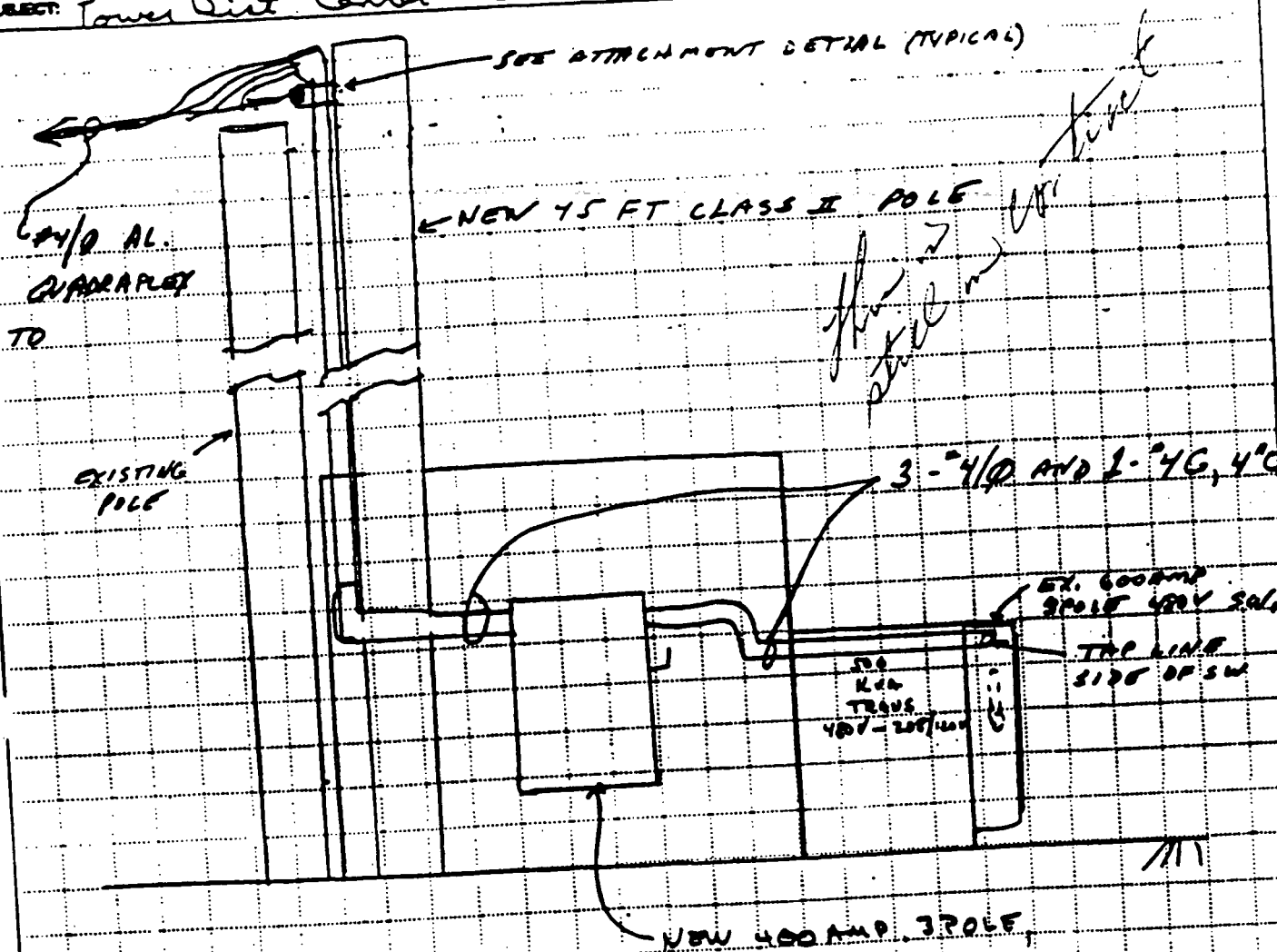

T82
T83
PERMA
LIFT ST
OOF82
DELETE 480 V.
FEEDS TO OSDF
TRAILERS
1
RES 2991 Rev
480V FEED TO
PERMANENT LIFT STATION
ORIGINAL
1
Page 1 of
94
10-21-94

FERNALD
ENVIRONMENTAL RESTORATION
MANAGEMENT CORPORATION

ENGINEERING CALCULATION

PROJECT NUMBER: RES 2971 Rev 1	
BY: J. E. Kerl	DATE: 10-21-96
CHECKED BY:	DATE:
PAGE: 2 OF 8	
REVISED:	

SUBJECT: Power Dist Center #2



Section AA

ORIGINAL

NOTES: 1) ALL WIRING TO BE COPPER WITH THWN INSULATION (ALL PAGES) UNLESS OTHERWISE STATED.

2) USE STRUCTURAL CHANNEL TO ATTACH ELECTRICAL EQUIPMENT TO STRUCTURES.

3) SET 45 FT POLE 6'-6"

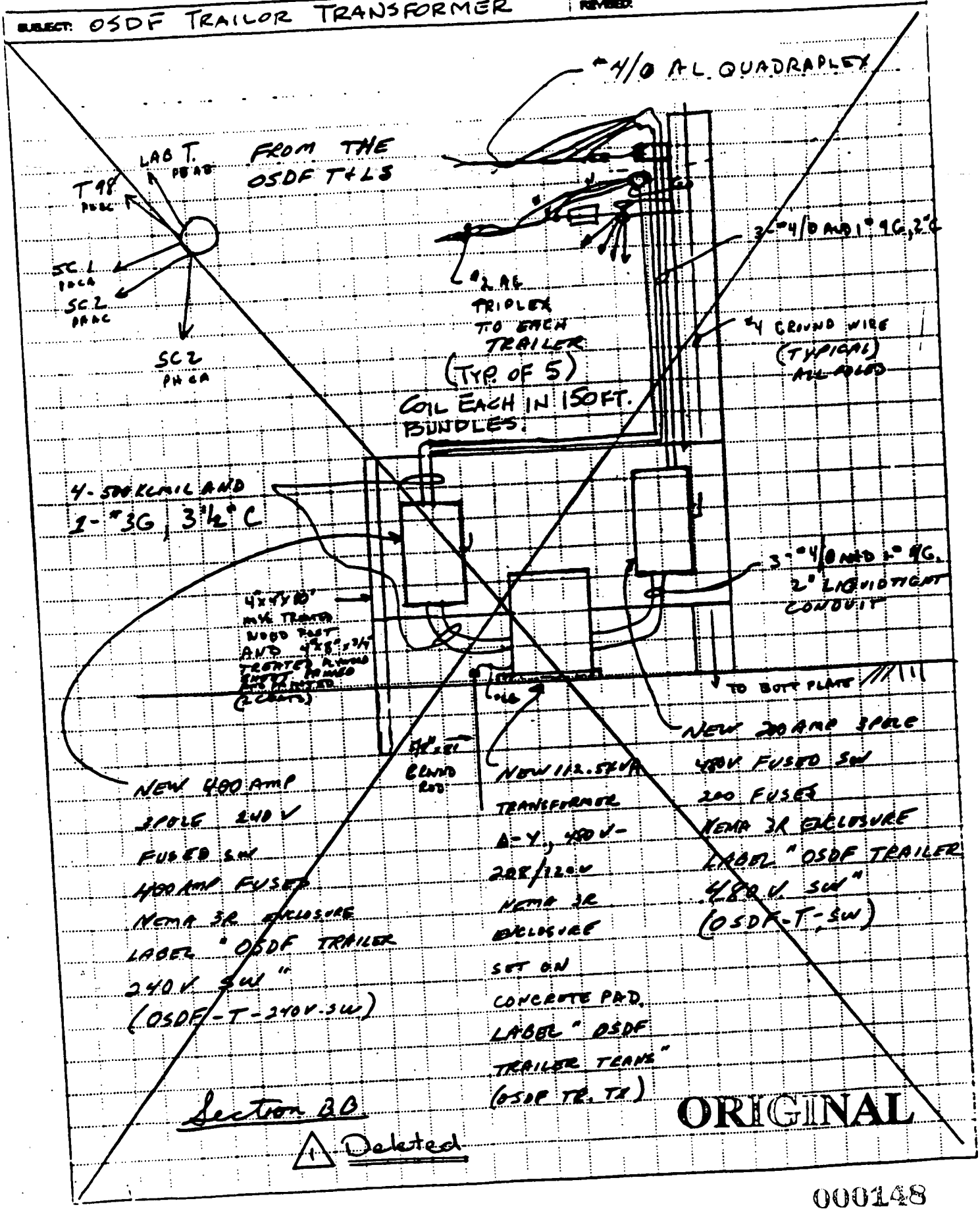
000147

FERNALD
ENVIRONMENTAL RESTORATION
MANAGEMENT CORPORATION

ENGINEERING CALCULATION

PROJECT NUMBER: 2971 Rev 1	949
BY: J. G. Kat	DATE: 10-21-96
CHECKED BY:	DATE:
PAGE 3 OF 8	
REVISED:	

SUBJECT: OSDF TRAILOR TRANSFORMER



Section 20

1 Deleted

ORIGINAL

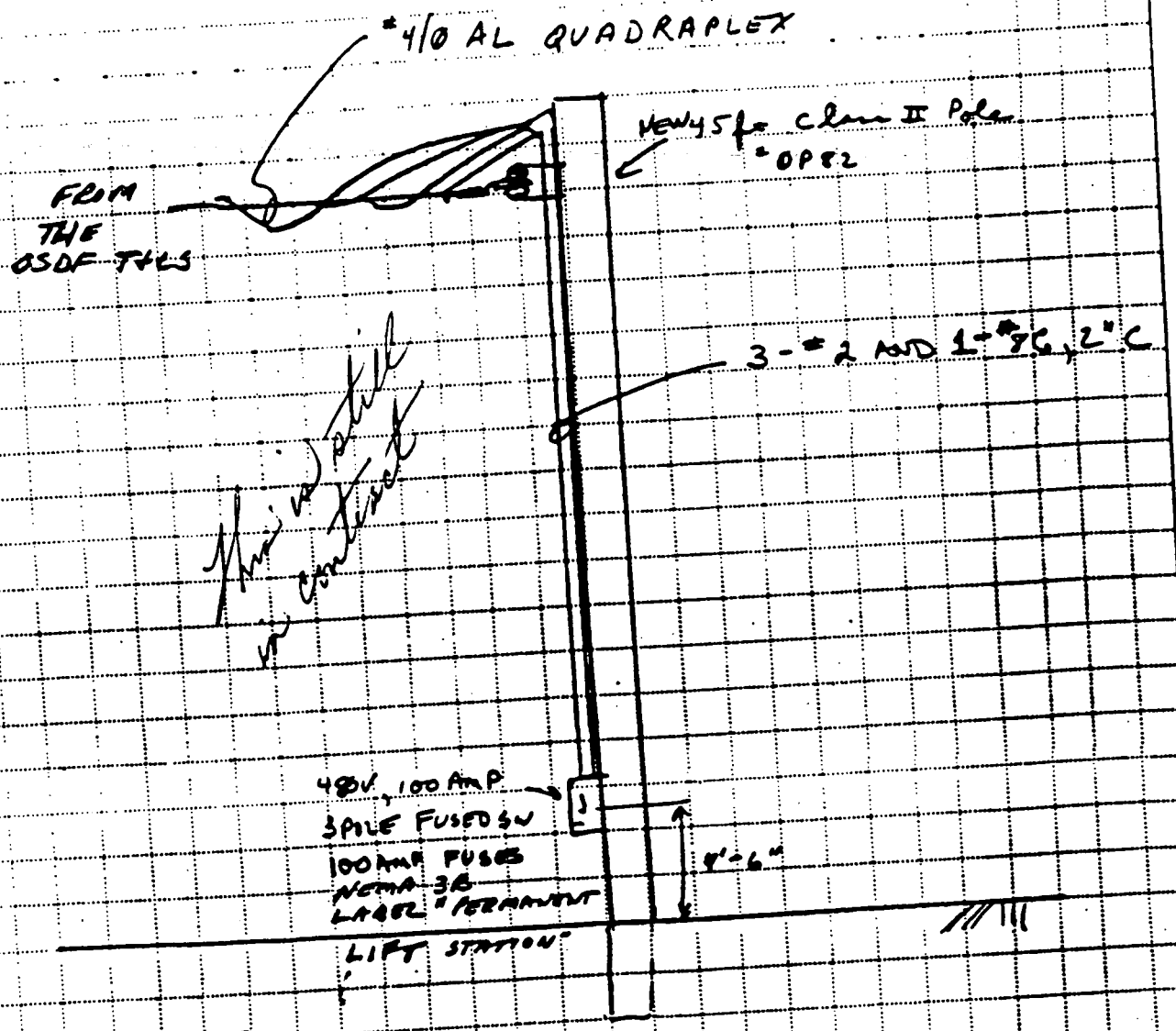
FERNALD
ENVIRONMENTAL RESTORATION
MANAGEMENT CORPORATION

ENGINEERING CALCULATION

PROJECT NUMBER: 2971 Rev 1	
BY: J.E. Kent	DATE: 10-21-96
CHECKED BY:	DATE:
PAGE 4 OF 8	
REVISED:	

949

SUBJECT: 480V. FEED TO PERMANENT L.S.



Section CC

NOTES 1) TAP AERIAC USING SPLIT BOLT APPROVED FOR AL/CU AND TAP SPLICE.

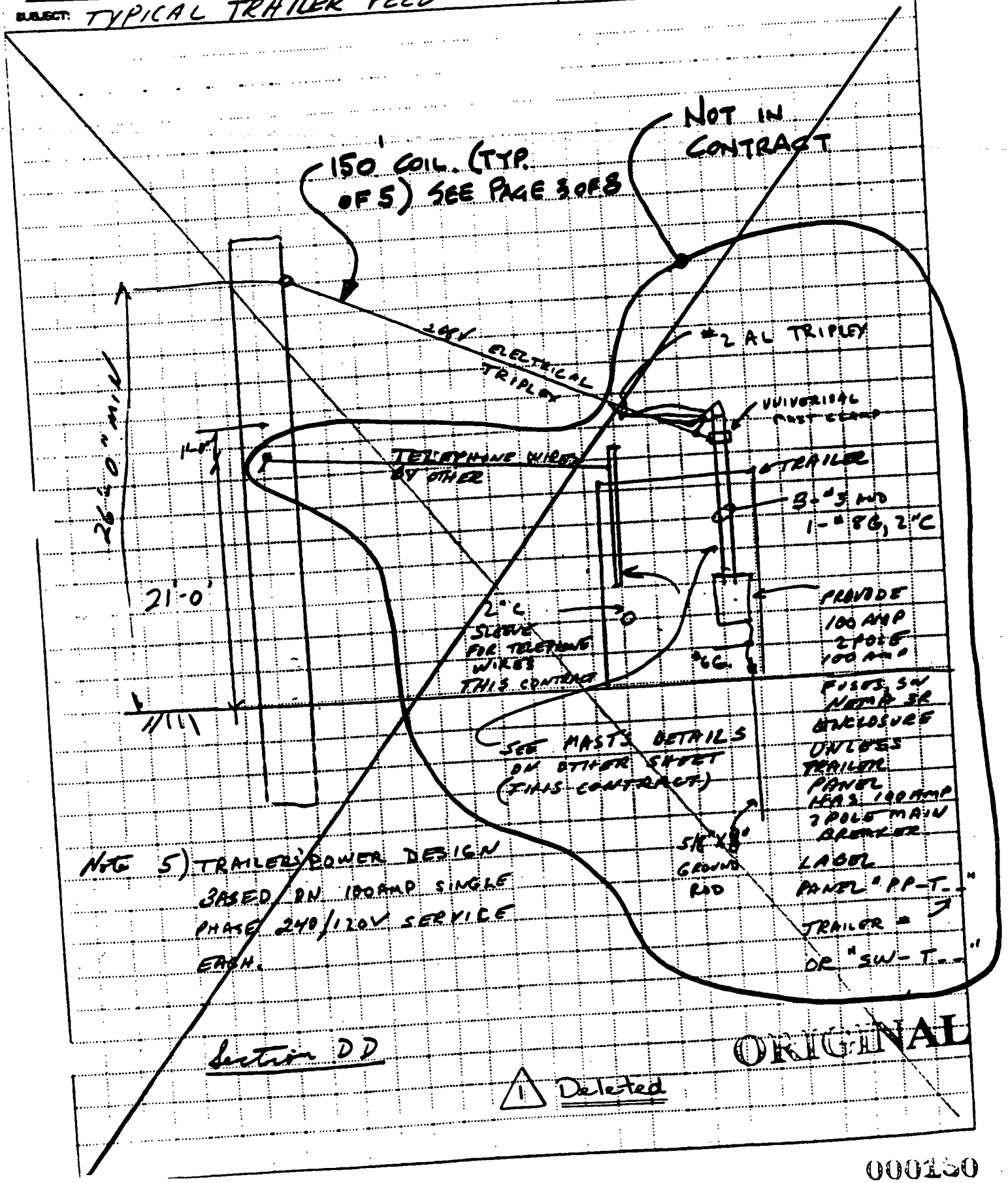
ORIGINAL

FERNALD
ENVIRONMENTAL RESTORATION
MANAGEMENT CORPORATION

ENGINEERING CALCULATION

PROJECT NUMBER: RES 2971 Rev 2	
BY: J. E. Kerl	DATE: 10-21-96
CHECKED BY:	DATE:
PAGE 5 OF 8	
REVISED:	

SUBJECT: TYPICAL TRAILER FEED



NOTE 5) TRAILER POWER DESIGN BASED ON 100AMP SINGLE PHASE 240/120V SERVICE EACH.

Section DD

ORIGINAL

1 Deleted

RNALD
IVIRONMENTAL RESTORATION
) IEMENT CORPORATION

ENGINEERING CALCULATION

PROJECT NUMBER	
BY	DATE 11-4-94
CHECKED BY:	DATE
PAGE	6 OF 8
REVISED:	

SUBJECT: Messenger Attachment (Typical)

5/8" inch Dia Bolt - H" Lg.
AB = 8814
with Round Washer
AB = 36805
Clevis AB
Insulator AB

Clevis Nuter
AB = 6823 1/2
Square Nut
AB = 5508MP
Palnut Lock Nut
AB = 5592

Wedge
Cl
U-

American Electric-Blackburn
Wedge Clamps

Rigid Stainless Steel Bail (Bail Length—6¼")
"FC" Flexible Bail (Bail Length—11¼")

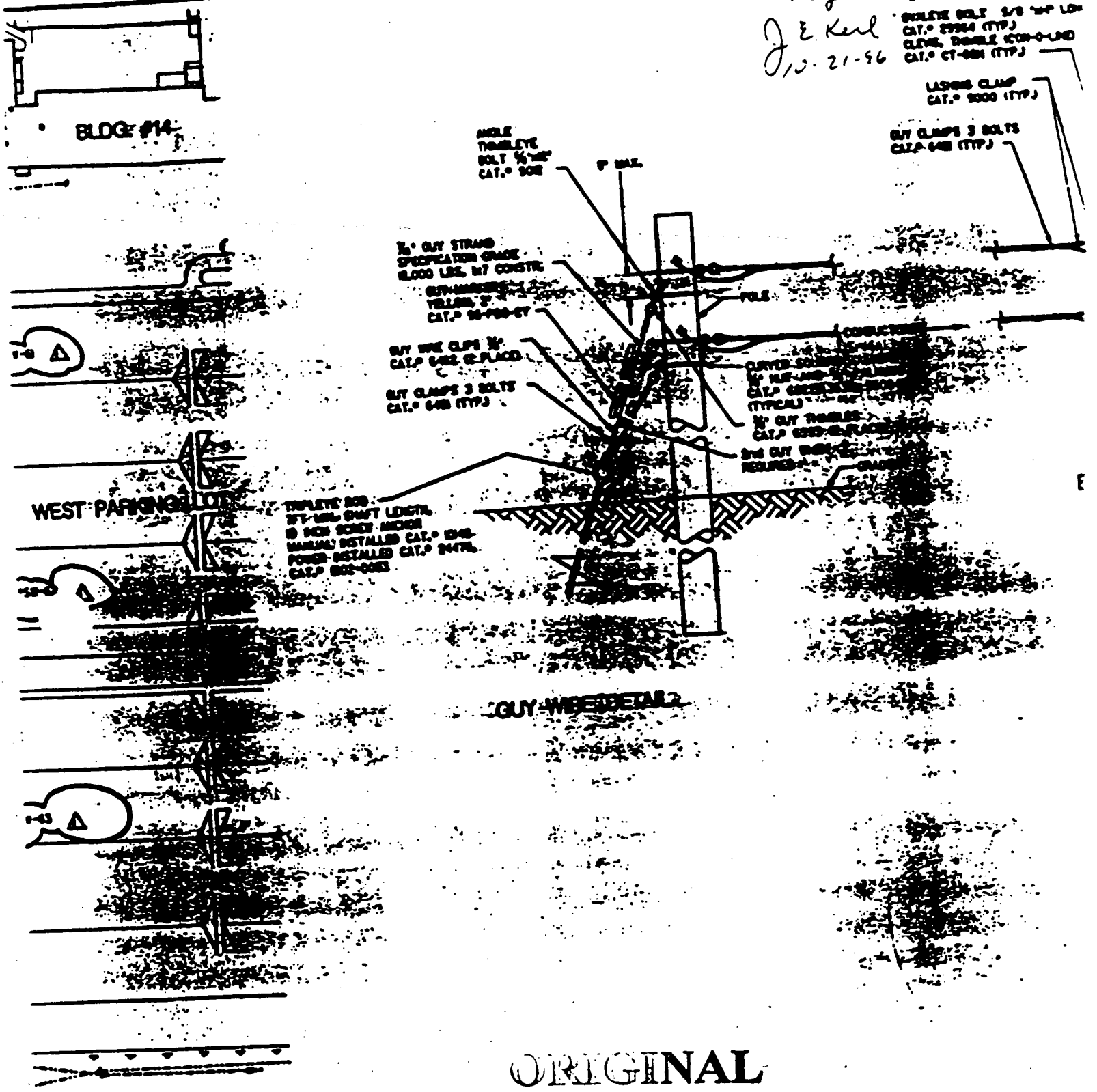
- For dead-ending self-supporting drop wire.
- Saves conductor—drop can be cut to exact length.
- Can be attached to bare neutral at any point in the span.
- Adjustments in drop conveniently made.
- Grips ACSR, AAAC, or Aluminum Conductor.

Aluminum Service Wedge Clamps—ACSR; Aluminum; AAAC Conductors

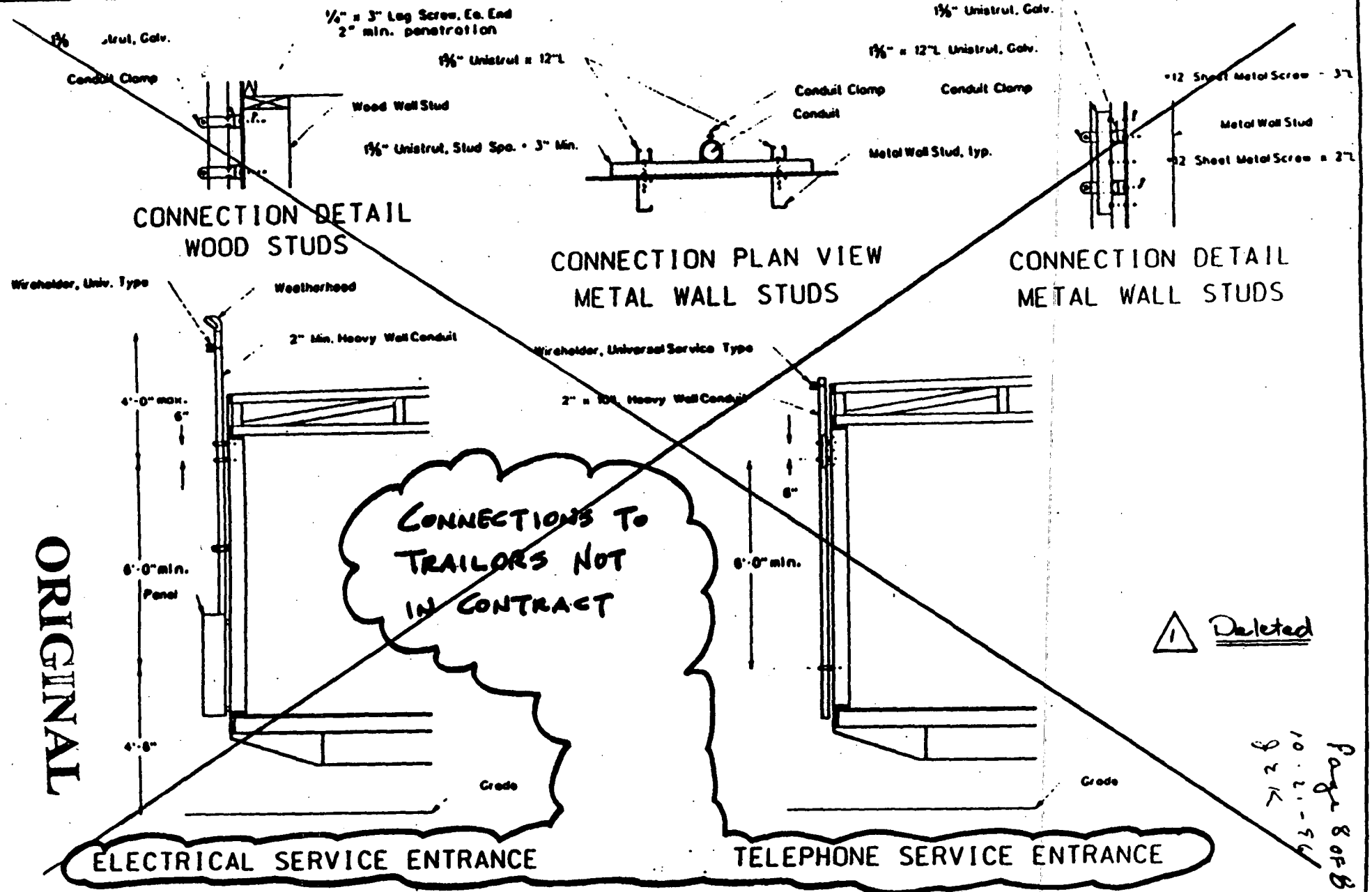
	Catalog Number	Wire Range ACSR	Wire Range Aluminum	Wire Range AAAC	Stainless B	Stainless L
W-4 Series Aluminum Wedge and Slider	W324-	2—6	1 SOL—6 SOL	2—6	2⅛	12
	W32-6FC				Bail	17½
	W334-	1/0—4	2/0 SOL—2 SOL	1/0—4	2⅛	13
	W33-6FC				Bail	18½
	W440-1	4/0—2/0	4/0 SOL—2/0 SOL	4/0—2/0	2⅛	13
	W44-6FC				Bail	18½

ORIGINAL

J E Keel
10-21-96



ORIGINAL



Page 8 of 8
10-12-96

FERMCO Fernald Environmental Restoration Management Corporation	SIZE A		DWG NO SK-3025-1	REV 0
ELECTRICAL POWER & TELEPHONE SERVICE				
TRAILER STANDARD - ELEVATION & DETAILS	SCALE Varies	M.J. BORGMAN	DATE 7/22/96	SHEET 9 of 9

0002553

PAY ITEM DESCRIPTIONS

For Pay Items 3 through 13, payment will be made upon submittal of invoice for materials received by the Subcontractor, and inspected/accepted at the FEMP by FDF Inc.

Pay Item	Pay Item Heading	Detailed Pay Item Description
7.0	INSTALLATION OF HDPE PIPING FROM COMH NO. 8 UP TO AND INCLUDING COMH NO. 10	The Subcontractor shall install the HDPE piping/manholes from COMH No. 8 up to and including COMH No. 10 in accordance with design drawings and specifications shown in Part 7 of this subcontract. All required testing shall be performed and accepted. This Pay Item includes jacking and boring, grading, grubbing, excavation, trenching, road paving, concrete work, backfill, labor, material or equipment incidental to the completion of this Pay Item.
8.0	INSTALLATION OF HDPE PIPING FROM COMH NO. 10 TO THE BIO-DENITRIFICATION SURGE LAGOON (BSL)	The subcontractor shall install the HDPE piping/manholes from COMH No. 10 to the BSL in accordance with design drawings shown in Part 7 of this subcontract. This Pay Item includes all associated mechanical and civil items/attributes, insulation, grading, grubbing, excavation, trenching, backfill, labor, material or equipment incidental to the completion of this Pay Item. All required testing shall be performed and accepted.
9.0	INSTALLATION OF 480V POWER TRANSMISSION LINE FROM BLDG. NO. 77 TO NORTH ENTRANCE ROAD	The Subcontractor shall install the 480V power line from building 77 to the North Entrance Road in accordance with design drawings and specification shown on Part 7 of this subcontract. All required testing shall be performed and accepted. This Pay Item includes any labor, material or equipment incidental to the completion of this Pay Item.
10.0	INSTALLATION OF 480V POWER LINE TO PERMANENT LIFT STATION ~~INCLUDING 480V FEEDER TO CONST. ADMIN. AREA~~	The Subcontractor shall install the 480V electrical power line from Power Dist. Center # 2 to the Permanent Lift Station ~~including the 480V feeder to the Const. Admin. Area~~ in accordance with design drawings and specifications shown in Part 7 of this subcontract. All required testing shall be performed and accepted. This Pay Item includes any labor, material or equipment incidental to the completion of this Pay Item.
11.0	INSTALLATION OF ELECTRICAL POWER, HEAT TRACING AND INSTRUMENTATION AT THE (BSL)	The Subcontractor shall install electrical power including instrumentation and heat trace at the BSL in accordance with design drawings and specification shown in Part 7 of this subcontract. This Pay Item includes any labor, material or equipment incidental to the completion of this Pay Item. All required testing shall be performed and accepted.
12.0	INSTALLATION OF INSTRUMENTATION, SOLAR PANELS/POLES, CONTROL PANEL, RECORDER AT LCS/LDS MANHOLES, PERMANENT LIFT STATION, AWWT FACILITY	The Subcontractor shall install instrumentation, solar panels with poles, control panel, flow recorder and required electrical power at the LCS/LDS Manholes, Permanent Lift Station, and AWWT Facility in accordance with design drawings and specifications shown in Part 7 of this subcontract. This Pay Item includes any labor, material or equipment incidental to the completion of this Pay Item. All required testing shall be performed and accepted.

0004154

ORIGINAL

949

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF	(6)DATE 4/17/97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E☒ MO ☐ CO ☐ OTHER ☐	(4A)RCI/DCN TITLE: POLE MODIFICATIONS		(11)DCN NO.: 1700-016

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
90X-5500-E-00503		1	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- UNDERGROUND UTILITIES REQUIRE THE RELOCATION OF PROPOSED POLES #101 & 100.
- NEED ADD'L POLE (99) FOR CONNECTION TO TELEPHONE BOXES
- SET NEW POLE (99) AND GUY ANCHOR AS LOCATED IN FIELD
- SET POLES 100 & 101 IN LINE AS LOCATED IN FIELD
- INSTALL 2-4" PVC CONDUITS W/ PULL WIRE, 36" DEEP. TERMINATE CONDUITS ABOVE GRADE AT POLE 99 AND EXISTING TELEPHONE BOXES
- PROVIDE AS BUILT LOCATIONS

(10)REQUESTOR: J C. JENKINS	COMPANY: FDF	DATE: 4/17/97	(12)FCE / PE: Richard L McGuire	DATE: 4/17/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☒ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

1) FDF Prepared orginal Design and should have signature for DCN Acceptance.
2) Parsons circulated DCN to Civil For INFO only. (See parsons Attached Comments)

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: James C. Jenkins	DATE: 4/17/97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CWP5	
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins			DATE 4/17/97
PERFORMANCE GRADE: (17) 4			
(18)CONSTRUCTION CONCURRENCE: Richard L McGuire	DATE: 4/17/97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☐ YES ☒ NO (19)			

FS-F-4259 (10/01/96)

[97] MAY 27 AM 9:32

received
RP 5-23-97

ORIGINAL

ENTERED

DCN 16 DCN-024 ORIG.1

000155

11 June 97

SRP PO164 Leachate Conveyance System

DOC. No.: DCN-024 ISSUE: 1 TRANSMITTAL No.: 1700-016

Pole Modification

Civil comments are as follows:

1. Review of the referenced drawing, 90X-5500-E-00503, Rev 1, does not indicate a conflict between the poles and underground utilities. Was this based on field determination of the UG utilities?

2. Pole OP101 on referenced drawing, 90X-5500-E-00503, Rev 1, may be located in or near the side ditch. Relocation of the pole should take into account the proposed roadway improvements, including drainage. This is applicable to all poles as they should be located out of the work area for the road contractor.

3. Poles and their appurtenances should be located a minimum of 8 feet from the edge of the road, if practical. (See comment 2 above also). Boxes should be flush with the ground if within the 8' area.

General comment

In general, the ODOT Location and Design Manual indicates that for roads with a design speed of 40 mph or less and an ADT less than 750, the clear zone from edge of pavement should be 8 feet. The location of the poles on the referenced drawing (copy received from FDF CAD Support file) are less than this. (Conversation with J. Jenkins 6/10 indicated the pole locations shown on the plans received from FDF CAD Support files may have been or are in the process of being revised to indicate the poles to be out of the road contractor's work zone.) Note that ODOT does indicate that this distance is not an absolute if accident history would indicate no problems. The civil group recommends that where possible, especially in curves, the 8 feet be met. Consideration should also be given to drainage improvements for the Rerouted North Entrance Rd. This also applies to guys for the poles and any above grade appurtenances.

PARSONS
ERA PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:
DCN 024	1	1700:016	5-27-97
TITLE: POLE MODIFICATIONS			PROJ. No.: SRP / P.O. No.: 164

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 5 / 30 / 97
DUE DATE

TO REVIEWERS:

1. Check the attached document against issued specifications to ensure that this document meets the intent of our specs.
2. Date and Initial this card, in red ink, as to the status.
3. Hand carry the attached document and this card to the Project Engineer.
4. If comments are needed, mark the original document in red ink.
5. The Project Engineer will return the completed document and card to Document Control.

Note: If you are in a remote location, call the Project Engineer for pick-up.

	ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
		PROCESS				
		MECHANICAL PROCESS				
		PIPING				
		STRUCTURAL				
	02	CIVIL KEN G.	6/6/97		KG	
CCS	~~01~~	~~ELECTRICAL JIM C./T. FERREL~~				
		INSTRUMENTATION				
		MATERIAL HANDLING				
		ARCHITECTURAL				
CCS	~~03~~	~~ENVIRONMENTAL, SAFETY, & HEALTH MIKE B.~~				
		HVAC				
		GEOTECHNICAL				
CCS	~~04~~	~~QUALITY ASSURANCE BILL U~~				
	05	PROJECT ENGINEER CARLTON S.	7/10/97		CS	
		TITLE III MANAGER				
		PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

Transmitted to Client	Date:	Initials:
Document Control	Date:	Initials:

* ORIGINATING PROJECT DESIGN ENGINEER C. SCHROEDER

SPECIAL INSTRUCTIONS:

(This Design & DCN Wkd by FDF - Parsons
Routed thru Civil for INFO ONLY)

~~FOR INFO. ONLY~~ CR Stet

3/96

ENG 123

000157

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 1700 | (2)S/C NO.: FSC-589 | (5)Pg 1 OF 1 | (6)DATE 4/9/97

(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM | (11)RCI NO.: 1700-012R

(4) RESPONSIBLE DISCIPLINE: E☒ MO ☐ CO ☐ OTHER ☐ | (4A)RCI/DCN TITLE: FLOW METERS | (11)DCN NO.: 1700-017

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
SPECIFICATION 13400	13400 - ATTACH. A SHEET 2	0	
VBS SHOP DRAWING	1700-589-040		

(9)☒ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☐ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- CLARIFY ACCEPTANCE OF ZIRCONIUM AS MATERIAL OF CONSTRUCTION FOR ELECTRODES FOR MAG METERS FE-012A, FE-012B
- VERIFY MINIMUM FLOW OF 72 GPM IS ACCEPTABLE

(10)REQUESTOR: J.C. JENKINS COMPANY: FDF DATE: 4/9/97

(12)FCE / PE: James C. Jenkins DATE: 4/9/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☑ YES

(14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons Comments (Page 1-3 of 3)

RCI - DCN ACCEPTANCE

(PARSONS)

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder DATE: 4/18/97

(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: N.A.

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins DATE: 4/21/97

PERFORMANCE GRADE: (17) 4

(18)CONSTRUCTION CONCURRENCE: Richard L. McKee DATE: 4/18/97

PURCHASE REQUISITION REQUIRED: ☐ YES ☑ NO (19)

(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

FS-F-4259 (10/01/96)

ORIGINAL

RCE 012R

received 4-10-97

000159

RCI NO: 1710:012R

The RCI author asked for clarification of acceptance of zirconium for magflow meters FE012A and FE012B versus spec data sheet requirement of 316 stainless steel. Also if a minimum flow of 72 GPM is acceptable versus spec data sheet requirement of 50 GPM.

The zirconium and 72 GPM is acceptable for leachate service. Also the grounding material can be zirconium and a liner material of tefzel is acceptable.

The following deliverables are affected:

DRAWING NO. OR DELIVERABLE	REV	ATTACHMENT SKETCH NO.	DESCRIPTION OF CHANGE
13400-Attachment A Sheet 2	0A		Minimum flow was 50GPM Added Note 6 to accept tefzel liner material Added Note 7 to accept zircromium as an electrode and grounding material

949

DOCUMENT REVIEW COMMENT SHEET

SME/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 4/18/97
DOCUMENT NO. AND TITLE: Leachate Conveyance System RCI-1700-012R		DATE COMMENTS DUE:
REQUEST NO.:		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC /	COMMENT RESOLUTION
	[illegible]		See ATTACHMENT		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

000121

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 1700	(2)S/C NO.: 537	(5)Pg 1 OF 2	(6)DATE 4/22/97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E☒ M☐ C☐ OTHER☐	(4A)RCI/DCN TITLE: INTERFACE ADJUSTMENTS FOR TIE-IN OF GROUNDWATER OPT./INJ. SYS.		(11)DCN NO.: 1700-018

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
CIVIL - PLAN & PROFILE - SHT 1 OF 4	92X-5900-G-00254	1	
CIVIL - PLAN & PROFILE - SHT 2 OF 4	92X-5900-G-00261	1	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

EXISTING CONDITION

TIE-IN COORDINATES FOR THE GROUNDWATER OPTIMIZATION/INJECTION SYSTEM, WHICH WERE SHOWN ~~SHOWN~~ ON THE TWO ITEM (7) DOCUMENTS, REQUIRE ADJUSTMENT TO IMPROVE CONSTRUCTABILITY

PROPOSED CHANGE

PROVIDE A SKETCH SHOWING THE REVISED COORDINATES FOR THE POINTS THAT NEED RELOCATION

(10)REQUESTOR: COMPANY: DATE:	(12)FCE / PE DATE:
CARLTON SCHROEDER PARSONS 4/22/97	~~Carlton Schroeder 4/25/97~~ g.e.g. James C. Jenkins 4/29/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) RELOCATE FOLLOWING POINTS TO NEW COORDINATES AS SHOWN ON THE attached SKETCH (Sheet 1 of 1) SKETCH NO. 20110-SK-007
   - GW-4
   - GW-7
   - POINTS OF CURVE BETWEEN GW-7 & GW-8
   - GW-8

2) RECORD AS-BUILTX CONDITIONS

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
C. Schroeder 4/24/97	2CUP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE

PERFORMANCE GRADE: (17) 4 James C. Jenkins

(18)CONSTRUCTION CONCURRENCE: DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:
Richard L McArthur 4/29/97	

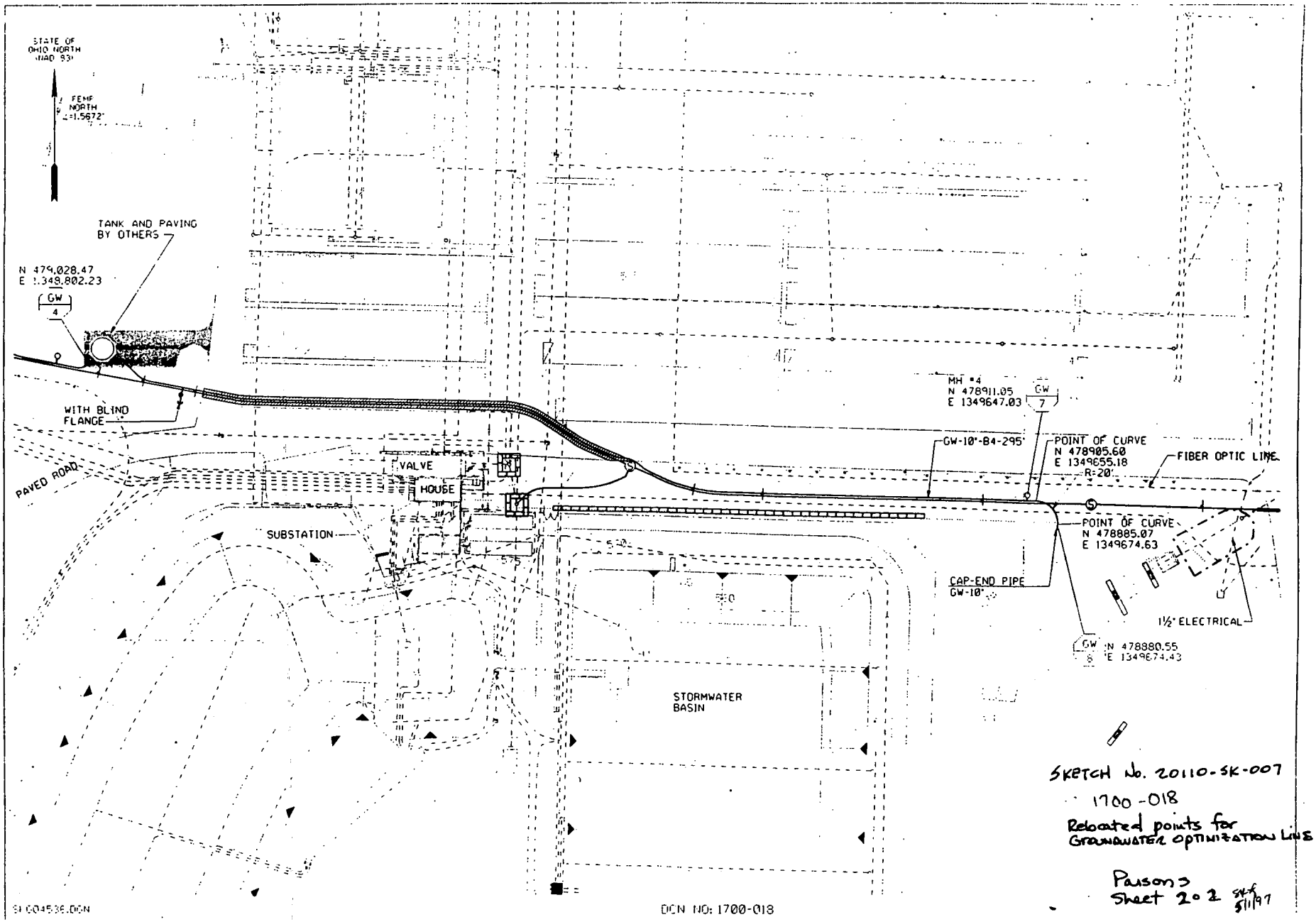
PURCHASE REQUISITION REQUIRED: ☐ YES ☑ NO (19)

FS-F-4259 (10/01/96)

ORIGINAL

Rec: 4-22-97

000162



SKETCH No. 20110-SK-007

1700-018

Relocated points for GROUNDWATER OPTIMIZATION LINE

Parsons
Sheet 202 4/7/97

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1700	(2)S/C NO: 589	(5)Pg 1 OF 3	(6)DATE 24 April 97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E☒ M☐ C☐ OTHER☐	(4A)RCI/DCN TITLE: LDS and LCS MANHOLES and PLS CONTROL SYSTEM MODIFICATIONS		(11)DCN NO.: 1700-014

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
DRAWING 90X-6000-E-00060 SHEET NO. E-4A DRAWING 90X-6000-E-00061 SHEET NO. E-7A		0 0	
DRAWING 90X-6000-M-00062 SHEET NO. M-2A		0	
CFC TECHNICAL SPECIFICATION	SECTION 15000	0	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

This DCN covers design changes related to the power supplies and control systems for the Leak detection systems manholes, Leachate Collection Manholes and Permanent Lift Station and have been based on recommendations previously provided by the designer, GeoSyntec Consultants. The design modification changes the direct current supply from a 12 volt system to a 24 volt system. The changes are detailed on page 2 for the drawings and page 3 for the technical specification listed. The changes should present a cost savings to the OSDF project due to increased availability of 24 volt power supplies and control systems.

(10)REQUESTOR: Dan Bodine	COMPANY: GeoSyntec	DATE: 24 April 97	(12)FCE / PE: James C. Jenkins	DATE: 4/24/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES (14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

(GEOSYNTEC, BODINE) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Daniel Bodine	DATE: 24 April 97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2 C U P 5	

(16)FDF PE ACCEPE & VERIFICATITANCON THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 4/24/97

PERFORMANCE GRADE: (17) 4 James C. Jenkins

(18)CONSTRUCTION CONCURRENCE: Richard L Matthews	DATE: 4-24-97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:

PURCHASE REQUISITION REQUIRED: ☐YES ☒NO (19)

FS-F-4259 (10/01/96)

ORIGINAL

LIST OF DRAWING CHANGES

Drawing No. 90X-6000-E-00060 Sheet No. E4A Rev. 0

Control Item	Change	Detail	No. of Places
1. Relay *Y1	Change coil voltage from 12 VDC to 24 VDC	No. 9	1
2. Relay *Y2	Change coil voltage from 12 VDC to 24 VDC	No. 9	1
3. Relay *Y3	Change coil voltage from 12 VDC to 24 VDC	No. 9	1
4. Relay *TY4	Change coil voltage from 12 VDC to 24 VDC	No. 9	1
5. LT-*01	Change 12 VDC excitation to 24 VDC	No. 11 and 7	2
6. LT-*02	Change 12 VDC excitation to 24 VDC	No. 11 and 7	2
7. Battery	Change total battery voltage from 12 VDC to 24 VDC	No. 8	1
		Total Drawing Place Changes	9

Drawing No. 90X-6000--E-00061 Sheet No. E7A Rev.0

Control Item	Change	Detail	No. of Places
1. Relay 10Y1	Change coil voltage from 12 VDC to 24 VDC.	No. 14	1
2. Relay 10Y2	Change coil and contact function voltage from 12 VDC to 24 VDC.	No. 14	2
3. Relay 10Y3	Change coil voltage from 12 VDC to 24 VDC.	No. 14	1
4. Relay 10TY4	Change coil voltage from 12 VDC to 24 VDC.	No. 14	1
5. Relay 10Y6	Change coil and contact function voltage from 12 VDC to 24 VDC.	No. 14	4
6. Relay 10Y5	Change contact function voltage from 12 VDC to 24 VDC	No. 14	4
7. LT-110	Change 12 VDC excitation to 24 VDC.	No. 16	1
8. LT-111	Change 12 VDC excitation to 24 VDC.	No. 16	1
9. BC-110	Change 12 VDC to 24 VDC.	No. 16	1
10. PS-110	Change 12 VDC to 24 VDC and 100 mA to 5A	No. 16	3
11. PS-111	Change 12 VDC to 24 VDC.	No. 16	1
12. LA-110 & LA-111B	Change 12 VDC to 24 VDC.	No. 16	1
13. Power Fuse Blown	Change 12 VDC to 24 VDC.	No. 16	1
14. Alarm Siren	Change 12 VDC to 24 VDC.	No. 13	1
15. Battery Charger	Change 12 VDC to 24 VDC.	No. 12	1
16. Lead Acid Battery	Change 12 VDC to 24 VDC	No. 12	1
17. LT-110	Change 12 VDC excitation to 24 VDC.	No. 12	1
18. LT-111	Change 12 VDC excitation to 24 VDC.	No. 12	1
19. LA-111B	Change 12 VDC to 24 VDC.	No. 12	1
20. PS-110	Change 12 VDC to 24 VDC and 100mA to 5A.	No. 12	2
		Total Drawing Place Changes	30

Drawing No. 90X-6000-M-0062 Sheet M-2ARev. 0

Control Item	Change	Detail	No. Of Places
1. LA-110	Change 12 VDC to 24 VDC.	No. 18	1
2. LA-111B	Change 12 VDC to 24 VDC.	No. 18	1
		Total Drawing Place Changes	2

ORIGINAL

Section 15000	Change
1.01.A.1.	Change 12 VDC to 24 VDC.
1.01.A.2	Change 12 VDC to 24 VDC.
1.01.B.2.	Change 12 VDC to 24 VDC.
2.01.C.	Change 12 VDC to 24 VDC and 53 watt to minimum 100 watt.
2.01.D.4.	Change 12 VDC to 24 VDC and Delete Class 8700.
2.01.D.5.	Delete Class 9050.
2.01.F.	Change 12 VDC to 24 VDC.
2.05.D.6	Delete Class 8501.
2.05.D.7.	Change 12 VDC to 24 VDC and Change 100mA to 5A.
2.05.D.8.	Change 12 VDC to 24 VDC and Delete Class 9050.
2.05.D.9	Change 12 VDC to 24 VDC and Delete Class 8700.
2.05.F.	Change 12 VDC to 24 VDC.
2.05.H.	Change 12 VDC to 24 VDC.
2.05.I.	Change 12 VDC to 24 VDC.
2.05.J.	Change 12 VDC to 24 VDC (Two Times).
2.06.A.	Change 12 VDC to 24 VDC (Three Times).
2.06.B.	Change 12 VCC to 24 VDC (Four Times).
2.06.C.	Change 12 VDC to 24 VDC (Two Times).
2,06.D.	Change 12 VDC to 24 VDC (Six Times).
2.06.E.	Change 12 VDC to 24 VDC (Three Times).
2.06.F.	Change 12 VDC to 24 VDC.
2.06.G.	Change 12 VDC to 24 VDC.

ORIGINAL

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 1700	(2)S/C NO: 589	(5)Pg 1 OF 1	(6)DATE 29 April 97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	(4A)RCI/DCN TITLE: ALUMINUM ACCESS COVERS FOR PERMANENT LIFT STATION		(11)DCN NO.: 1700-020

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
DRAWING 90X-6000-S-00069 SHEET NO. S-3A		0	
DRAWING 90X-6000-M-00067 SHEET NO. M-9A		0	
CFC TECHNICAL SPECIFICATION	SECTION 15000 PART 2.08	0	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☐DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

This DCN supplements DCN No. 008 by including the Permanent Lift Station (PLS) manhole cover design changes as follows: Change the material of construction from stainless steel to aluminum for the manhole opening, but keep the opening size at 4-ft x 4-ft.

Change the material of construction from stainless steel to aluminum and size from 3-ft x 3-ft to 2-ft x 2-ft for the clean out cover located at the north end of the concrete slab.

Change the material of construction from stainless steel to aluminum for the clean out located at the south end of the concrete slab.

Specification Section 2.08 changes as follow to incorporate DCN No. 008 and this DCN changes.

Part 2.08.A. Change "14, gauge, Type 316 stainless steel" to " 11 gauge, aluminum" two places.
Part 2.08.B. Change "cadmium plated" to "stainless steel".

This DCN will not affect the status of VBS submittal No. 27 R1, Shop Drawings for the Aluminum Access Doors. Also please note that the affected drawings by DCN No. 008 should have included Drawing No. 90X-6000-M-00066.

(10)REQUESTOR: Dan Bodine	COMPANY: GeoSyntec	DATE: 29 April 97	(12)FCE / PE: James C. Jenkins	DATE: 4/29/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☒YES (14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Daniel Bodine	DATE: 29 April 97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
(16)FDF PE ACCEPE & VERIFICATITANCON THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins		DATE: 4/29/97
PERFORMANCE GRADE: (17) 4		
(18)CONSTRUCTION CONCURRENCE: Richard L. McClure	DATE: 4/29/97	(21)WORK COMPLETED: (SIGN OFF BY FCE OR PE) DATE:
PURCHASE REQUISITION REQUIRED: ☐YES ☒NO (19)		

FS-F-4259 (10/01/96)

ORIGINAL

000167

949

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1700	(2)S/C NO: 589	(5)Pg 1 OF 1	(6)DATE 07 May 1997
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	(4A)RCI/DCN TITLE: HDPE Dual Containment Pipe		(11)DCN NO.: 1700-021

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
CFC Technical Specification	Section 02605 Part 2.05	0	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☐DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

This DCN responds to a written request by VBS HDPE pipe supplier, ISCO INDUSTRIES, INC. in a letter dated April 28, 1997 attached to Submittal No. 77 Rev. 2, to re-evaluate the spacing allowed for support centralizers between the carrier and the containment pipe. The design change to Specification Section 2.05 is as follows:

Part 2.05.F Change "maximum allowable spacing of 4 feet" to "maximum nominal spacing of 4.5 feet" .

The referenced letter above also discusses the specification requirement (Part 2.05.C) of furnishing pipe/fittings with the carrier pipe/fittings ends extending 6 inches beyond the containment pipe/fitting ends. For the pipe, this requirement is intended to allow space for proper installation (fusion welding) of the carrier pipe. Since the carrier pipe is being furnished movable within the containment pipe this requirement can be met during actual pipe installation. Quality Control inspection shall verify proper fusion welding in the field. If pipe length adjustments need to be made on a case by case basis, then it shall be made as required by Quality Control. No change to the specification is necessary.

(10)REQUESTOR:	COMPANY:	DATE:	(12)FCE / PE	DATE:
Dan Bodine Dan Bodine	GeoSyntec	7 May 97	James C. Jenkins	5/7/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☒YES (14)FOR DCN: ☐APPROVED ☑APPROVED AS NOTED ☐DISAPPROVED

ORIGINAL

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Daniel Bodine	7 May 1997	

(16)FDF PE ACCEPE & VERIFICATITANCON THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 5/7/97

PERFORMANCE GRADE: (17) A James C. Jenkins

(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGN OFF BY FCE OR PE)	DATE:
Richard L McGuire	5/7/97		

PURCHASE REQUISITION REQUIRED: ☐YES ☑NO (19)

FS-F-4259 (10/01/96)

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE - 949

(1)WP / WO NO. 1700	(2)S/C NO. 589	(5)Pg 1 OF 2	(6)DATE 07 May 1997
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO
(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	(4A)RCI/DCN TITLE: Pavement Restoration Detail		(11)DCN NO.: 1700-022

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Drawing 92X-5900-G-00257		0	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☐DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

This DCN adds to the existing Pavement Restoration Detail on Drawing 92X-5900-G-00257 Rev.0 granular subbase requirements. These requirements are consistent with pavement restoration repairs used at this site. The modification to the restoration detail is attached and is summarized as follows:

Provide a 6-inch thick Aggregate Base, crushed stone or crushed gravel, ODOT 304.02, beneath the Bituminous Aggreate Base Course and compact to a minimum 98 % Standard Proctor. Beneath the 6-inch layer, provide 12-inch layer placed in two 6-inch lifts, of Aggregate Base gravel or stone material ODOT 304.02 or Size No. 89 ODOT 703.01, compacted to minimum 95 % Standard Proctor.

This design change will not significantly increase water infiltration around the pipe, because the surface will be paved and the pipe will have at least 12-inches of compacted cohesive trench fill material above it. This DCN addresses clarifications and comments raised in RCI No. 1700-009R.

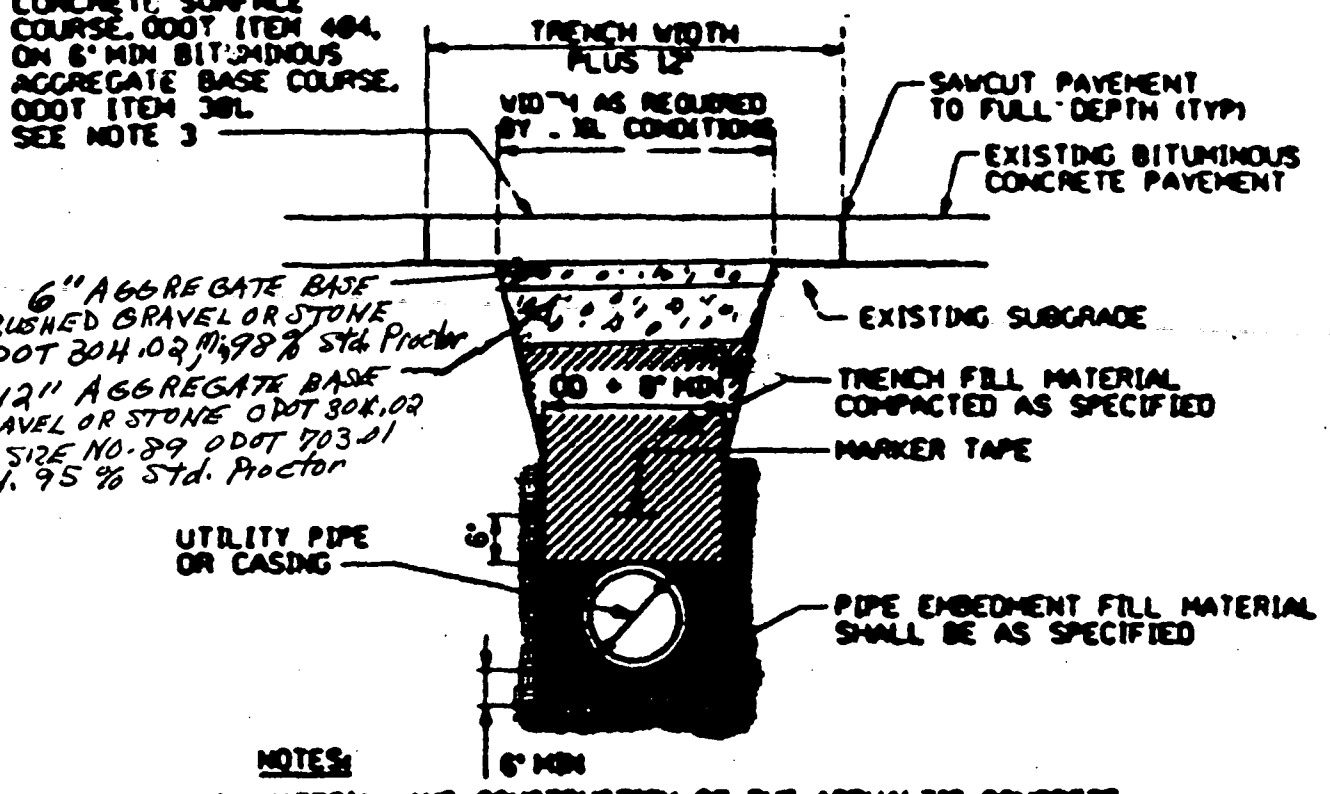
(10)REQUESTOR: Dan Bodine	COMPANY: GeoSyntec	DATE: 7 May 97	(12)FCE / PE James C. Jenkins	DATE: 5/8/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES (14)FOR DCN: ☐APPROVED ☑APPROVED AS NOTED ☐DISAPPROVED

ORIGINAL

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Dan Bodine	DATE: 7 May 97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CWP5	
(16)FOF PE ACCEPE & VERIFICATITANCON THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins			DATE: 5/8/97
PERFORMANCE GRADE: (17) 4			
(18)CONSTRUCTION CONCURRENCE: Richard L McInnis	DATE: 5/8/97	(21)WORK COMPLETED: (SIGN OFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☑YES ☐NO (19)			



NOTES:

1. MATERIAL AND CONSTRUCTION OF THE ASPHALTIC CONCRETE PAVING SHALL COMPLY WITH THE REQUIREMENTS OF SECTIONS 301, 401 AND 404 OF ODOT STANDARD SPECIFICATION.
2. COMPACT PAVEMENT BY STEEL WHEEL ROLLER TO ACHIEVE EVEN AND SMOOTH FINISH, WITHOUT ROLLER MARKS. HAND-COMPACT IN AREAS INACCESSIBLE TO ROLLING EQUIPMENT.
3. PLACE PAVEMENT IN LAYERS NOT TO EXCEED 3 INCHES COMPACTED DEPTH. THE THICKNESS OF THE REPLACEMENT BITUMINOUS CONCRETE SHALL BE AT LEAST AS THICK AS THE EXISTING. USE ODOT ITEM 301 MATERIAL AS NECESSARY.
4. ADD TACK COAT ITEM 407, ODOT STANDARD SPECIFICATIONS BETWEEN LAYERS IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.

TYPICAL PAVEMENT RESTORATION DETAIL

NTS

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE -

949

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF 1	(6)DATE 5/6/97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: EX MO CO OTHER D	(4A)RCI/DCN TITLE: K-65 CASING PIPE		(11)DCN NO.: 1700-023

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92x-5900-G-00257		0	
92x-5900-G-00266		1	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- CHANGE CASING PIPE FROM NOMINAL 14" TO NOMINAL 12" @ K-65 TRENCH FOR 8"/4" LEACHATE.
- REF. SUBMITTAL VBS SUBMITTAL # 75

(10)REQUESTOR: J.C. JENKINS COMPANY: FDF DATE: 5/8/97	(12)FCE/PE: Richard L McGuire DATE: 5/8/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons additional comment on attached Page 1 of 1

ORIGINAL

1997

Carlton Shroedy (Parsons) 6/9/97

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: James C. Jenkins DATE: 5/8/97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CWP5
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins DATE: 5/8/97	
PERFORMANCE GRADE: (17) 4	
(18)CONSTRUCTION CONCURRENCE: Richard L. McGuire DATE: 5/8/97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:
PURCHASE REQUISITION REQUIRED: ☐ YES ☒ NO (19)	

FS-F-4259 (10/01/96)

received 5-27-97

DCN-018 P0164

DCV 023

ENTERED 7/24/97

000171

DOCUMENT REVIEW COMMENT SHEET

LEACHATE CONVEYANCE SYSTEM

6/8/97

SITE/OWNER: | REVIEWING DIVISION: PARSONS | DATE: 5/27/97

DOCUMENT NO. AND TITLE: DCN-018 K-65 CASING PIPE (4"/8" LGS) | DATE COMMENTS DUE:

REQUEST NO.: 1 / TRANSMITTAL: 1700-023

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC /	COMMENT RESOLUTION
1	K. Gerard		Changing casing pipe from 14" to 12" (nominal) is acceptable. We expect that the placement of the 4"/8" Leachate Conveyance line in the 12" casing will be more difficult.		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

000172

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF 1	(6)DATE: 5/14/97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☒ OTHER☐	(4A)RCI/DCN TITLE: CONCRETE TESTING		(11)DCN NO.: 1700-024

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
—			
FSC-589			

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- CONCRETE TESTING IS PRESENTLY IN VILLAGE BUILDING SERVICES CONTRACT.
- PROPOSE TO DELETE FROM VBS CONTRACT AND INSTRUCT GEOSYNTEC TO PERFORM THIS TASK SINCE THEY ARE RESPONCIBLE FOR OTHER TESTING AND HAVE LABORATORY SERVICES ON SITE. EQUIPMENT FOR PREPARING CONCRETE CYLINDERS IS ALREADY PART OF GEOSYNTEC LAB SET UP.

(10)REQUESTOR: J. C. JENKINS	COMPANY: FDF	DATE: 5/14/97	(12)FCE / PE: Richard L McKenna	DATE: 5/14/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☒ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: James C. Jenkins	DATE: 5/14/97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: N.A.

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 5/14/97

PERFORMANCE GRADE: (17) 4 James C. Jenkins

(18)CONSTRUCTION CONCURRENCE: Richard L McKenna	DATE: 5/14/97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:

PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)

FS-F-4259 (10/01/96)

ORIGINAL

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1700 | (2)S/C NO.: FSC-589 | (5)Pg 1 OF 3 | (6)DATE 5/19/97

(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM | (11)RCI NO.:

(4) RESPONSIBLE DISCIPLINE: R☒ M☐ C☒ OTHER☐ | (4A)RCI/DCN TITLE: Alignment Change | (11)DCN NO.: 1700-025

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Civil Plan + Profile	92X-5900-G-00266		
Civil Plan + Profile	92X-5900-G-00262		

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER | (9)☒ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

* Change the alignment of the LCS and other underground utilities between the OU4 Access Rd and clean-out manhole #10. (Based upon soil conditions) unpaved
* Field locate clean-out manhole #9 to 1 area between OU4 Access Rd. and the Haul Rd.
* See Attached Sketches #20110-SK-008 + 009.

(10)REQUESTOR: J. Ellis | COMPANY: FDF | DATE: 5/19/97 | (12)FCE / PE: James C. Jenkins | DATE: 5/20/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES | (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See PARSONS Attached Comments (Page 1 of 1)

2) Record changes as "AS BUILT CONDITIONS"

RCI - DCN ACCEPTANCE

(PARSONS)

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder | DATE: 5/23/97 | (20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CWP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins | DATE: 5/23/97

PERFORMANCE GRADE: (17) 4

(18)CONSTRUCTION CONCURRENCE: Richard L McGuire | DATE: 5/23/97

PURCHASE REQUISITION REQUIRED: ☑ YES ☐ NO (19)

(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) | DATE:

FS-F-4259 (10/01/96)

ORIGINAL

received 5-21-97

000174

DCN 025 DCN-021

22 May, 1997

Leachate Conveyance System
PO164
TRANSMITTAL No.: 1700-025
Doc. No.: DCN-021 ISSUE: 1

Subject: Alignment Changes

Comments are as follows:

A. The PIV's and laterals shown on Dwg G00266 and on Detail 1, Dwg G00259 were not shown to be installed on Sketch #20110-SK-009. The PIV's and COMH 9 should be installed as far as possible away from the proposed edge of pavement while holding the designed tie-in locations.

B. Since the utility corridor is being relocated underneath the proposed OU2 haul road, it is especially important that the materials, installation, and compaction of the pipe embedment and trench fill are provided in accordance with the construction specifications.

D C. It is recommended that this DCN receive status "B" approval.

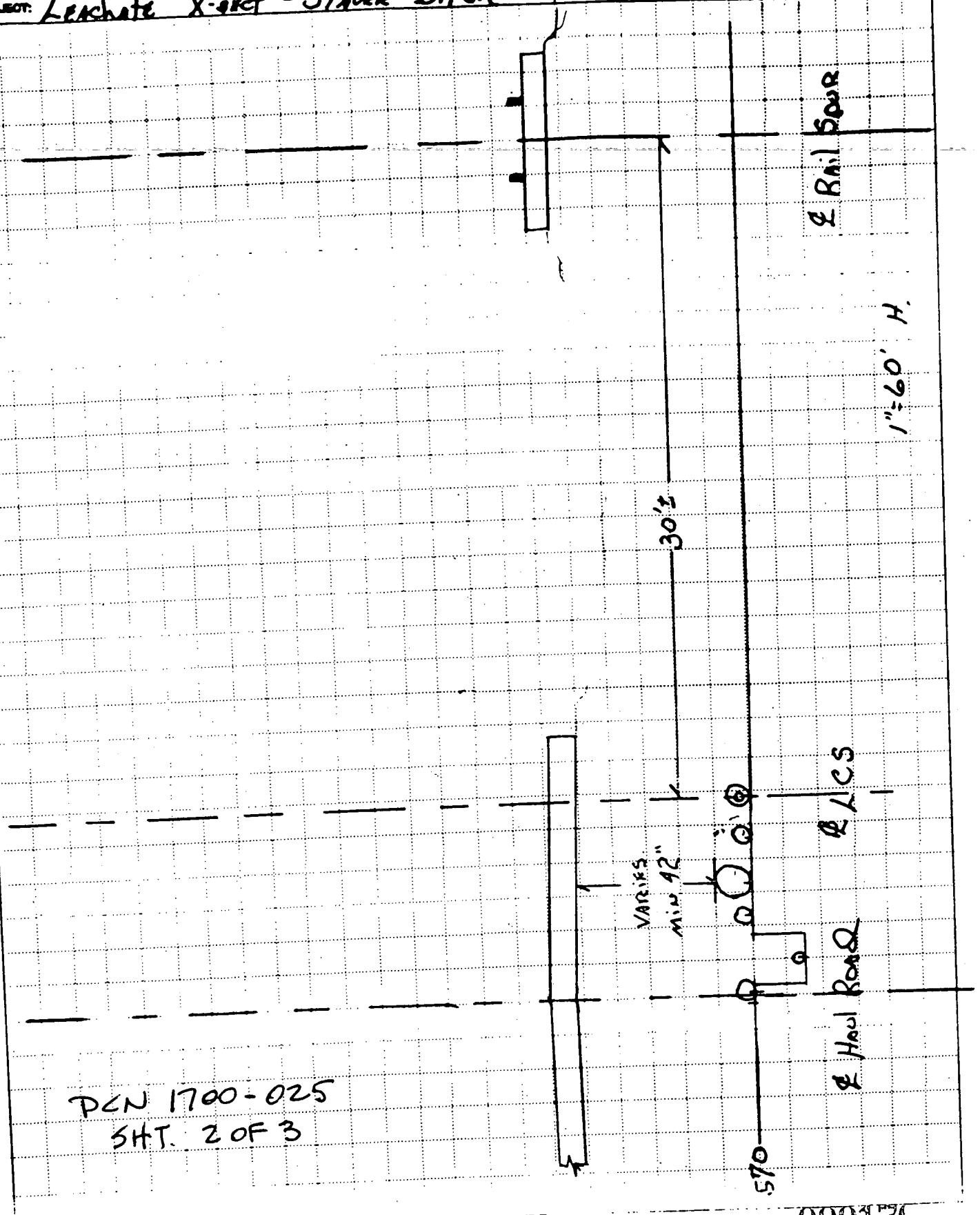
K69 C CE-6" TIE-IN TO K-65 TRENCH MAY REQUIRE ADJUSTMENT.

FERNALD
ENVIRONMENTAL RESTORATION
MANAGEMENT CORPORATION

ENGINEERING CALCULATION

PROJECT NUMBER: Haul Rd / LCS 949	
BY: JRE	DATE: 5/19/97
CHECKED BY:	DATE:
PAGE 1 OF 1	
REVISED: Sketch # 2011D-SK-008	

SUBJECT: Leachate X-sect - Stauer Ditch



PCN 1700-025
SHT. 2 OF 3

949

TO BE REMOVED BY OTHERS

4" CARRIER AND
8" CONTAINMENT
EFFLUENT LINE

M-1
N 480817.93
E 1348055.53

REMOVE AND REPLACE
EXIST. CHAIN LINK FENCE

SEE NOTE 11

PAVEMENT RESTORATION
DETAIL SEE DWG G00257

18L HIGH NITRATE TANK
(TO BE REMOVED BY OTHERS)

18L HIGH NITRATE TANK (TO BE REMOVED BY OTHERS)

HIGH NITRATE STORAGE TANK

FOR CC-6" LINE CONTINUATION SEE DWG #18A-1920-P-00301

OU2 HAUL ROAD CONSTRUCTION BY OTHERS) SEE NOTE 9

OU4 ACCESS ROAD

BITUMINOUS PAVED ACCESS ROAD

FUTURE LIFT STATION BY OTHERS

REMOVE AND REPLACE EXIST. CHAIN LINK FENCE

MAINTAIN 12.5' MIN FROM ℄ TRACK

FIELD ROUTE UNLNTY LINES TO STEEL PIPE CASING

PARKING AREA

MONITORING WELL REMOVED BY OTHERS

BOILER PLANT

PAVEMENT RESTORATION SEE DWG G00257

END CAP
N 480752.30
E 1348025.99
SEE NOTE 12

END CAP DW-6
N 479998.61
E 1348037.66

END-CAP SN-3"
N 479950.22
E 1347964.54

12" STEEL PIPE CASING SEE NOTE 13
N 479900.34
E 1347975.05
N 479853.26
E 1347989.02

9. USE
10. STOI
11 CAP 92X-
12. FIEL LOCA
13. EXCE COMF REST THE

REF DWG
92X-5900-X
92X-5900-G
92X-5900-G
92X-5900-G
92X-5900-G
92X-5900-G
92X-5900-G
92X-5900-G
92X-5900-G

ESSARY

E AS NEEDED)

HERS)

Sketch # 20110-SK-009
DCN 1700-025
SHT. 3 OF 3

PLAN
SCALE: 1" = 50'

From 92X-5900-6-0026

177

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE-

SRL 7/10/97

(1)WP WU NO.:	(2)S/C NO.:	(5)Pg	(6)DATE
1700	FSC-589	1 OF 23	5/21/97

(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM — (11)RCI NO.:

(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☒ OTHER☐ — (4A)RCI/DCN TITLE: Combined Trench Relocation — (11)DCN NO.: 1700-026

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00261	Sh. 3	R.1	
92X-5900-G-00266	Sh. 1	R.1	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Relocate LCS and other underground utilities as shown in Sketch # 20110-SK-010 to avoid monitoring wells.
Radius corner to 50' to 55'.
Section Detail 2 on Dwg G 00259 to be relocated unchanged.

(10)REQUESTOR: Jeff Kellis COMPANY: FDF DATE: 5/21/97 (12)FCE / PE: James C. Jenkins DATE: 5/21/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☒ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

1) See Attached Page 1 of 1
2) Record Changes as "As Built" Conditions

(PARSONS) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder DATE: 5/23/97 (20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CWP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 5/27/97

PERFORMANCE GRADE: (17) 4 James C. Jenkins

(18)CONSTRUCTION CONCURRENCE: Richard L. Mertens DATE: 5/23/97 (21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

PURCHASE REQUISITION REQUIRED: ☑ YES ☐ NO (19)

FS-F-4259 (10/01/96)

received 5-21-97

1997 MAY 21 PM 3:14

DCN 026 020

ORIGINAL

Page 2-4
1700-026
P9
949

22 May, 1997

Leachate Conveyance System
PO164
TRANSMITTAL No.: 1700-026
Doc. No.: DCN-020 ISSUE: 1

Subject: Combined Trench Relocation

Comments are as follows:

A. It is recommended that this DCN receive status "A" approval.

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE 949

(1)WP / WO NO.: 1700	(2)S/C NO.: SC 589	(5)PG 1 OF 1	(6)DATE 5-21-97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☐ OTHER ☐	(4A)RCI/DCN TITLE: ELEVATION OF G.W. 10		(11)DCN NO.: 1700-027

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
DWG 92x5900 G00261		1	

(9)☒RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☐DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

AT WHAT ELEVATION SHOULD G-W 10" BE AT STA. 7+ TO 9+. THERE WAS DISCUSSION OF A D.C.N. TO RAISE IT TO THE LEVEL OF LCS LINE.

(10)REQUESTOR: MJC COMPANY: VBS DATE 5-21-97 (12)FCE / PE Richard L McLaren DATE 5/22/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☒YES (14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

- RUN GW-10" AT SAME INVERT ELEVATION AS LEACHATE FROM COORDINATE GW 9 / 4 WESTERLY. AIR RELIEF VALVE AT GW 9 / 4 SHALL BE ELIMINATED.
1) See Parsons' approved as Noted Comments - Page 1 of 1 attached
Carlton Schroeder (Parsons) 6/10/97

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: James C. Jenkins DATE 5/21/97

(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE

PERFORMANCE GRADE: (17) James C. Jenkins

(18)CONSTRUCTION CONCURRENCE: Richard L McLaren DATE 5/22/97

PURCHASE REQUISITION REQUIRED: ☐YES ☐NO (19)

(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE

FS-F-4259 (10/01/96)

1997 MAY 27 AM 9:32

ORIGINAL

ENTERED

DCN 027

received 5-23-97

000181

LEACHATE CONVEYANCE SYSTEM

DOCUMENT REVIEW COMMENT SHEET

SRP PC 1-4

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 6/6/97
DOCUMENT NO. AND TITLE: DCN-022 ELEVATION OF GW-10"		DATE COMMENTS DUE:
REQUEST NO.: 1 / TRANSMITTAL 1700-027		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC 1	COMMENT RESOLUTION
1.	K.Gerard		Dwg. 92X-5900-G-00261, Rev 1 shows a down slope from GW-4.		
			Top of GW-10" to have a 36" min. Cover, at GW-4. MATCH inv.		
			of 4"/8"LCS line at Sta 9+50.		
2.	K.Gerard		With the slope indicated above, the future tank will be able		
			to serve as an air release. Air release MH #1 (GW-9) may be		
			deleted, pending agreement by FDF OU-5.		
3.	T. Hiles		I agree with K. Gerard comments The response written on the DCN is NOT acceptable		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

000282

FOUNDATION AND SPECIFICATIONS

949

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 20110	(2)S/C NO.: 1700	(5)PG 1 OF 1	(6)DATE 5-20-97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☑ OTHER ☐	(4A)RCI/DCN TITLE: HILTI KWIK BOLT ANCHOR MAT. SPEC.		(11)DCN NO.: 1700-028

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
LCS DRAWG 92X-5900-G-00258 REV.0	92X-5900-G-00258	0	
NOTE 6 CIVIL DETAILS SHT 3 of 3			

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

REFERENCE DRAWING NOTE 6 SPECIFIES ANCHOR STUDS, WEDGE, NUT & WASHER TO BE AISI 316 MATERIAL. THE ANCHOR STUDS RECEIVED WERE AISI 304. VILLAGE BUILDING SERVICES SUBMITTAL # 76 PIPE SUPPORT DETAIL WAS APPROVED WITH AISI 304 MATERIAL. THE ITEMS ARE IN QA HOLD STATUS.

(10)REQUESTOR: H. MILLIRON COMPANY: VBS QC DATE 5/21/97 | (12)FCE / PE Richard L McKenna DATE 5/22/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES (14)FOR DCN: ☐APPROVED ☒APPROVED AS NOTED ☐DISAPPROVED

- 304 SS IS ACCEPTABLE

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: James C. Jenkins DATE 5/22/97 | (20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins DAT 5/22/97

PERFORMANCE GRADE: (17) A

(18)CONSTRUCTION CONCURRENCE: Richard L McKenna DATE 5/22/97 | (21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DAT

PURCHASE REQUISITION REQUIRED: ☐YES ☐NO (19)

FS-F-4259 (10/01/96)

Parsons (Design Org.) Concurs Carlton Schroedl 6/4/97

1997 MAY 27 AM 9:32

ORIGINAL

received 5-23-97

DCN-028 DCN-028

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 20110	(2)S/C NO.: 1700	(5)PG 1 OF 2	(6)DATE 5-20-97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E☐ M☒ C☐ OTHER☐	(4A)RCI/DCN TITLE: ISCO SUPPLIED HDPE PIPE FITTINGS		(11)DCN NO.: 1700-029

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
SPEC. SC589, SECTION 02605, PART 1.04	20110-TS-0002	1	
ITEMS B&C			

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

1.) ISCO SUPPLIED LCS 45/90° AND T FITTINGS RECEIVED ARE NOT RECONCILABLE TO MANUFACTURER PRODUCTION RUN DATES TO ESTABLISH WRITTEN MATERIAL CERTIFICATION AND VERIFICATION OF RESIN QUALITY LOT NOS. THE FITTINGS WERE SHOP FUSED OF VARIOUS CROSS CUTS TO MAKE UP A FINISHED ASSEMBLY. CONSEQUENTLY, MATERIAL CERTIFICATIONS ARE NOT AVAILABLE.

2.) A TEE WITH STUB WAS INSPECTED AND VERIFIED TO BE COMPRISED OF SDR 17 AND SDR 21 ASSEMBLED COMPONENTS. THE MATERIAL SPEC IS SDR 26. THE OUT OF SPEC MATERIAL IS A HIGHER RATED MATERIAL THAN SPECIFIED. (REF. ATTACH) ITEMS ARE IN QA HOLD STATUS.

(10)REQUESTOR: H. MILLIRON COMPANY: VBS QC DATE 5/21/97 (12)FCE / PE: C Jenkins DATE 5/22/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES (14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

1 – The fittings under question, a limited number, shall be inspected by QC, including every joint and document condition, any pipe notations (Lot #'s etc), manufacturers inspection documentation and any other visual observations or measurements made. Manufacture must provide written certification that these fittings conform to spec. Section 02605 2.02.B and furn certifiable property values for lot #s identified in the QC inspect After the above is completed and approved (QC included) then the fitt may be used.

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Daniel Bolin DATE 23 May 1997 (20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins DATE 5/23/97

PERFORMANCE GRADE: (17)4

(18)CONSTRUCTION CONCURRENCE: Richard L. McKinney DATE 5/23/97 (21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE

PURCHASE REQUISITION REQUIRED: ☐YES ☒NO (19)

FS-F-4259 (10/01/96)

2 – The Tee shall be inspected and certified as stated in 1 above. In addition the SDR 21 portion must have been used only for the containment pipe.

ORIGINAL

Friday, May 09, 1997

Mayur P. Kadakia
Village Building Services Inc.
7311 Vine Street
Cincinnati, OH 45216

Dear Mayur:

This letter is in response to a particular situations regarding the HDPE Dual Containment fittings that we have supplied for the **Leachate Conveyance System** at Fernald, OH.

You have brought to my attention that the Quality Inspector has inquired about the SDR ratings on the fittings that we have supplied. Why does the SDR rating on the fittings not match the SDR on the shipping ticket? The rating on the shipping ticket is in alliance with the pipe SDR that you have purchased from us. You will note that all of the fittings are an equal or lower SDR rating (higher PSI rating) than the pipe.

Therefore, the products that are in question will meet or exceeds all specifications of this project. Sorry about this confusion, but this is considered common practice since all manufactures of HDPE molded fittings do not have all SDR's available. However, all the substitutions will handle the necessary testing that is required.

This is something we have done in the years past at Fernald, but please call if you have any further questions or concerns about this issue at (502) 583-6591.

Sincerely,

Chris Gilmore
Sales Manager

CC: Scott Hoff

Post-It® Fax Note 7671	Date 5/09/97	# of pages ▶
To HOWARD	From Mayur	
Co./Dept.	Co.	
Phone #	Phone #	
Fax #	Fax #	

LSCO INDUSTRIES, Inc.
924 Baxter Avenue
Box 4545
Louisville, KY 40204

DCN 1700-029
SHEET 2 OF 2

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC 589	(5)Pg 1 OF 2	(6)DATE 5-21-97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	(4A)RCI/DCN TITLE: END SEAL ON CASING		(11)DCN NO.: 1700-030

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5700-G-00257		0	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

SPEC. CALLS FOR LINK SEALS - NOT AVAILABLE IN SIZES REQUIRED. PROPOSE USE OF BRICK AND MORTAR TO SEAL ENDS.

(10)REQUESTOR: MK COMPANY: VBS DATE 5-21-97 (12)FCE / PE Richard L McAfee DATE 5/22/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES (14)FOR DCN: ☐APPROVED ☒APPROVED AS NOTED ☐DISAPPROVED

- FIBER GLASS INSULATION W/ WATERPROOF CEMENT GROUT IS ACCEPTABLE WHERE LINK SEAL SIZES ARE UNAVAILABLE.

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: James C. Jenkins DATE 5/22/97 (20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5

(18)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE 5/22/97

PERFORMANCE GRADE: (17) A James C. Jenkins

(16)CONSTRUCTION CONCURRENCE: Richard L McAfee DATE 5/22/97 (21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE

PURCHASE REQUISITION REQUIRED: ☐YES ☐NO (19)

FS-F-4259 (10/01/96)

PARSONS CONCURS, Carlton Schroeder 6/4/97

1997 MAY 27 AM 9:32

ORIGINAL

received

DCN 1700-030

000186

949

Village building SERVICES INC.
MECHANICAL CONTRACTORS

PROJECT Leachate Conveyance System FSC-52

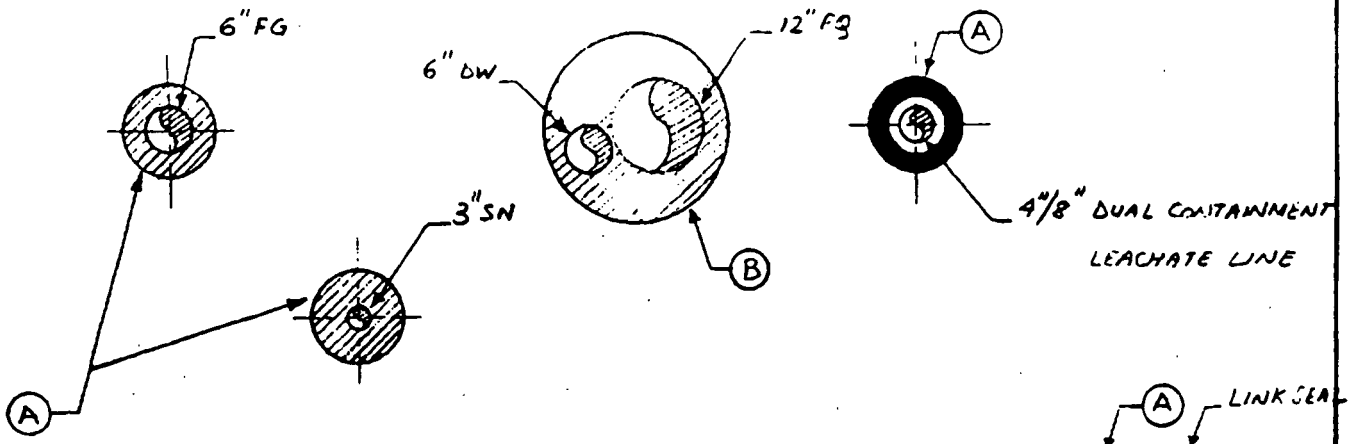
PAGE 1 OF 1 FILE

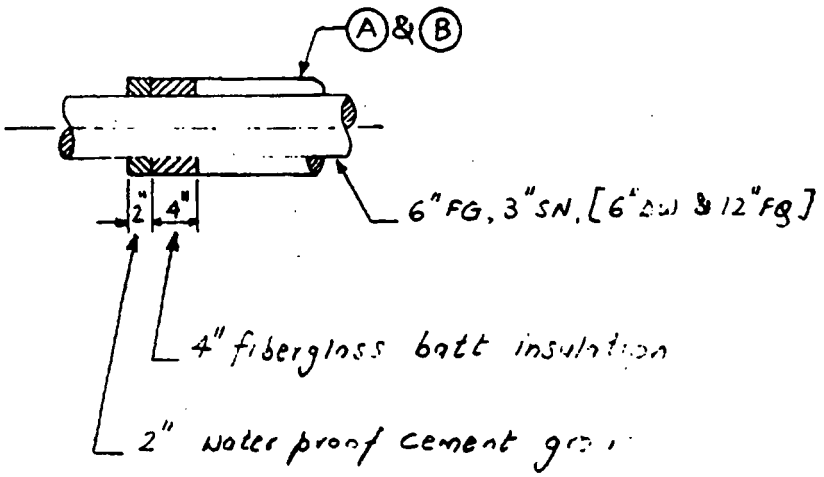
BY Mayur P Kodatia DATE 05/21/97

Dwg No SK-0197-005 Rev 0

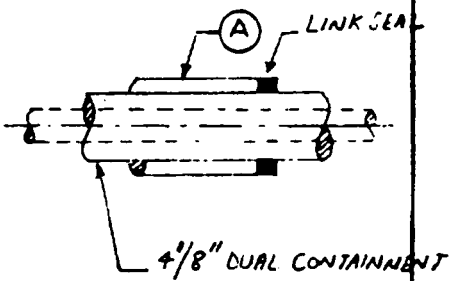
(A) - 12.750" O.D X 50 FT. LONG CASING PIPE

(B) - 24.000" O.D X 50 FT. LONG CASING PIPE





Detail @ both ends of casing pipe



Detail @ both ends of casing pipe

Boring Under K-65 Trench

(refer dwg. 92X-5700-G-00259 Rev. 0-Section 7)

DCN 1700-030

SHEET 2 OF 2

000187

LEACHATE CONVEYANCE SYSTEM

DOCUMENT REVIEW COMMENT SHEET

SRP A0164

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 6/3/97
DOCUMENT NO. AND TITLE: DCN-025 END SEAL ON CASING		DATE COMMENTS DUE:
REQUEST NO.: 1 / TRANSMITTAL No: 1700-030		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC 1	COMMENT RESOLUTION
1	K. Gerard		No exception taken to using 4" fiberglass insulation w/ 2" (min) waterproof cement grout where link seal sizes are not available.		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

000188

949

REQUEST FOR CLARIFICATION OR INFORMATION/ DESIGN CHANGE NOTICE

(1)WP / WORK NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF 2	(6)DATE 5/27/97
(3)S/C TITLE: Leachate Conveyance System			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: EO MO CO OTHER O	(4A)RCI/DCN TITLE: CE-6" BDN stub-out		(11)DCN NO.: 1700-031

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Dwg 92X-5900-G-00266	Sheet 4	1	
Dwg 18A-1920-P-00301		2	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☐ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Stub-out CE-6" BDN conduit per detail on Dwg 18A-1920-P-00301 At 25' right of LCS Baseline.

"As Built" line routing from Sta 13+00± to end cap.

"As Built" co-ordinates of end cap.

(10)REQUESTOR: Jeffrey Ellis COMPANY: FDF DATE: 5/27/97 (12)FCE / PE James C. Jenkins DATE: 5/27/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See PARSONS Attached Comments Page 1 of 1
2) See Parsons Attached Sketch 1 of 1
3) Record "AS-BUILT" CONDITIONS

(PARSONS) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder DATE: 6/12/97 (20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 6/16/97

PERFORMANCE GRADE: (17) 4 James C. Jenkins

(18)CONSTRUCTION CONCURRENCE: Richard L. Mahnke DATE: (21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)

FS-F-4259 (10/01/96)

ORIGINAL

received 5-28-97

ENTERED

DCN 121

30 May 97

PO-164 Leachate Conveyance System

DCN No.: 028 ISSUE: 1 TRANSMITTAL No.: 1700-031
CE-6" BDN STUB OUT

Civil approves as noted below.

1. An earlier DCN (1700-025) had a sketch, 20110-SK-008, which showed the proposed centerline to centerline, c/c, distance from Rail to 4"/8" LCS line to be 30'±. The c/c distance proposed for CE-6" stub out to 4"/8" LCS to be 25'±. This will place the stub out very close to the rail ballast/ties and the concrete support for the rail crossing of the K-65 trench. Recommend that the 25' be modified to 12'-15'. Also that the bending of the CE-6" line start 10' from the flange versus at the flange and the deflection angles of the line approximate 45°. See enlargement from 92X-5900-G-00266 (modified).

2. The original design of the common trench indicated a common trench bottom in this area except for the FG-6" line (Section 6, 92X-5900-G-00259). Sketch 20110-SK-011 shows the 4"/8" LCS line to be higher than the other lines. Recommend that the original profile be maintained except for the CE-6" line which can be routed lower (like the FG-6") and under the 4"/8" LCS line. This will require a lot less cut. Maintain minimum cover and clearance as indicated on the construction drawings.

3. The tie in to the K-65 trench detailed on drawing 18A-1920-00301, Rev 2 was not evaluated as it was beyond the original scope of work.

1100-031

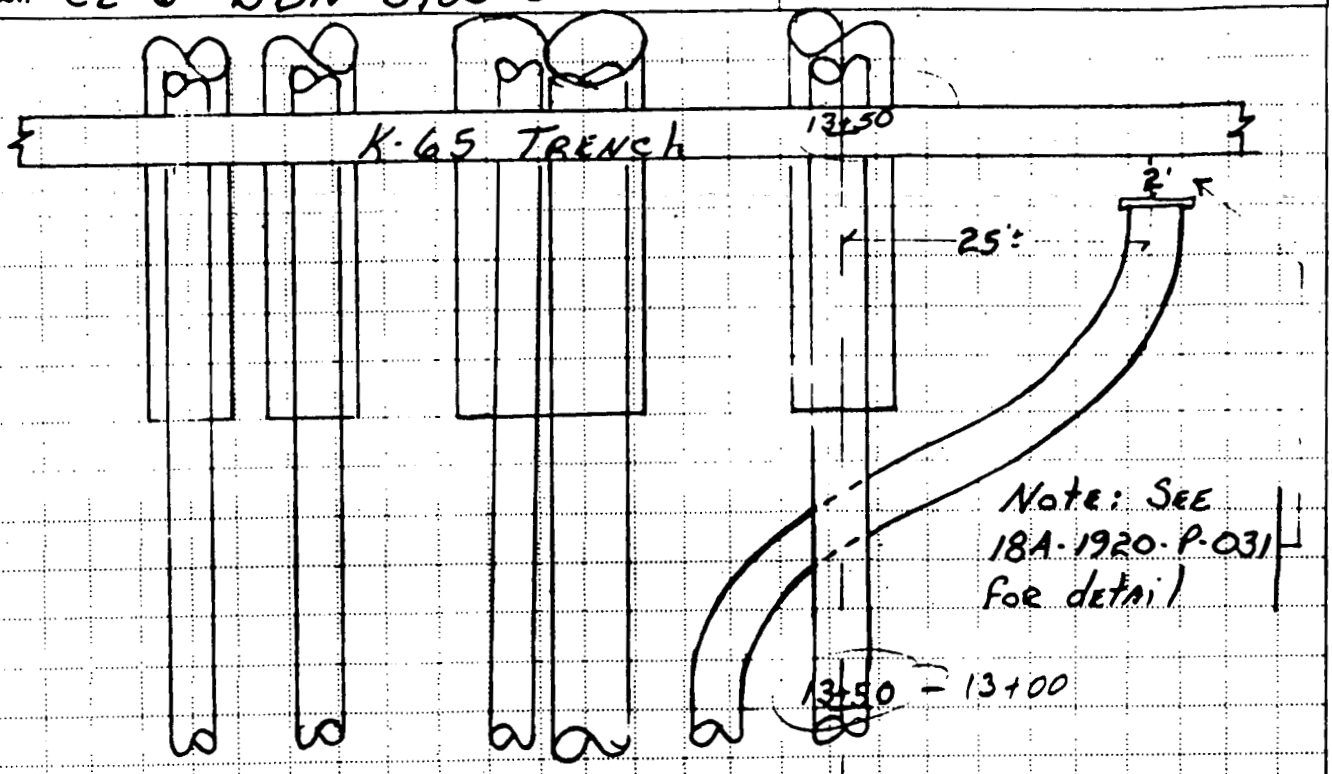
949

FERNALD
ENVIRONMENTAL RESTORATION
MANAGEMENT CORPORATION

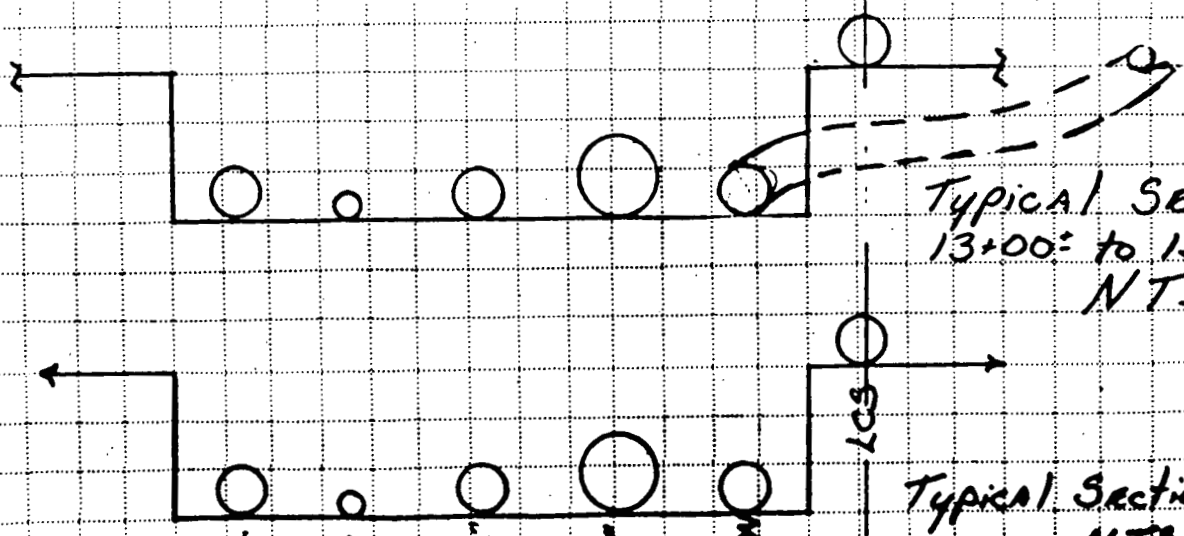
ENGINEERING CALCULATION

Sketch PROJECT NUMBER: 20110-SK-011	
BY: Jeff Ellis	DATE: 5/27/97
CHECKED BY:	DATE:
PAGE 2 OF 2	
REVISED:	

SUBJECT: CE-6" BDN Stub-out



PLAN N.T.S.



Typical Section
13+00± to 13+50±
NTS

Typical Section
N.T.S.
6th. 9+05± to 13+00±

000191

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.:	(2)S/C NO.:	(5)Pg	(6)DATE
1700	FSC-589	1 OF 12	5/28/97

RGB

(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM

(11)RCI NO.:

(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☒ OTHER☐

(4A)RCI/DCN TITLE: PIPE - HYDROSTATIC TESTING

(11)DCN NO.: 1700-033

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
SPECIFICATIONS	Sec. 02605	0	
20110-TS-0001			

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- SEC. 02605, 3.07, C.2 REQUIRES TESTING BEFORE BACKFILLING PIPE TRENCH.
- REQUEST LATITUDE TO PERFORM TESTING AFTER BACKFILLING IN AREAS DEEMED NECESSARY TO MEET SCHEDULED INSTALLATION DATES AND COORDINATION WITH OTHER PROJECTS IN COMMON CONSTRUCTION AREAS.

~~- ALL OTHER ARTICLES OF 02605, 3.07 REMAIN UNCHANGED~~ RGB 30 May 97

(10)REQUESTOR:	COMPANY:	DATE:	(12)FCE / PE	DATE:
J.C. Jenkins		5/28/97	J.C. Jenkins	5/28/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

See Page 2 of 2 for Response

(GEOSYNTEC) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Ranil Bodinl	30 May 97	N.A.

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE:

PERFORMANCE GRADE: (17) 4 James C. Jenkins 5/30/97

(18)CONSTRUCTION CONCURRENCE	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
Richard L [illegible]	5/30/97		

PURCHASE REQUISITION REQUIRED: ☐ YES ☑ NO (19)

FS-F-4259 (10/01/96)

ORIGINAL

ENTERED

LEACHATE CONVEYANCE SYSTEM
Pipe Hydrostatic Testing

(13) RESPONSE

Technical Specification Section 2605 Part 3.07 shall be changed as follows:

Article C.2.a. Add sentences "At pipe locations documented and approved in writing by the Construction Manager the Subcontractor may, at his own risk, pressure test pipe after placing fill over the pipes. Locations of all joints, fittings, etc., shall be documented before backfilling. The test procedure shall be as specified, except the test duration shall be minimum 3 hours. "

Article C.2.c. Replace "120 psi " with " 50 psi " and " 130 psi internal pressure for " with " 95 psi internal pressure for the LCS ".
Add sentence " Test pressures for other pipe systems shall be in accordance with ASME B31.9 937.3.4 and as otherwise specified. "

All other Articles of Section 02605 Part 3.07 remain unchanged.

The approval of pipe locations to be tested after backfilling should be evaluated on a case by case basis and where a definite need to delay testing has been established. When properly prepared, the subcontractor can complete testing rather quickly and efficiently and even during weather conditions when backfilling may not be suitable.

Daniel Bolin
30 May 97

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF 5	(6)DATE 5/6/97
(3)S/C TITLE: Leachate Conveyance System			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☒ OTHER☐	(4A)RCI/DCN TITLE: Sediment Control		(11)DCN NO.: 1700-034

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Dwg 92X-5900-G-00251	G0002	1	
Dwg 92X-5900-G-00261	G0003	1	
Dwg 92X-5900-G-00246	G0004	1	
Dwg 92X-5900-G-00262	G0005	1	
Dwg 92X-5900-G-00257	G0007	0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

* All references to "Straw Bale Detail" shall be referred to the "Sediment Fence Detail."
* Delete "Straw Barrier Detail" from Drw. 92X-5900-G-00257-G0007-0.
* Replace "Typical Check Dam Detail" from Drw 92X-5900-G-00257 with attached sketch 20110-SK-013.

(10)REQUESTOR: Jeffrey Ellis	COMPANY: FDF	DATE: 6/5/97	(12)FCE / PE: James C. Jenkins	DATE: 6/9/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons Approved as Noted Comments - Page 1 of 1

- Parsons - RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder	DATE: 6/24/97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CWP5	
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY)			DATE: 7/2/97
PERFORMANCE GRADE: (17) 5			
(18)CONSTRUCTION CONCURRENCE: Richard L. McAfee	DATE: 6/27/97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☑ YES ☐ NO (19)			

FS-F-4259 (10/01/96)

ORIGINAL

received
6 1 5-11

DOE 774 NCN 050

DOCUMENT REVIEW COMMENT SHEET

DCN-030

PO164

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 6/23/97
DOCUMENT NO. AND TITLE: LEACHATE CONVEYANCE SYSTEM		DATE COMMENTS DUE:
REQUEST NO.: DCN 1700-034 SEDIMENT CONTROL		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC /	COMMENT RESOLUTION
1	Y. AFSHAR		SKETCH # 20110-SK-013 (ATTACHED) FROM ~~CANO~~ RAINWATER AND LAND. DEVELOPMENT IS ACCEPTABLE.		
			PARSONS RECOMMEND TO USE A FILTER FABRIC (ODOT ITEM 712-09, TYPE D)		
			UNDER THE STONE.		
2.	K. GERARD		SILT FENCE SHALL BE USED IN LIEU		
			OF STRAW BALES. SILT FENCE		
			SHALL CONFORM TO DETAIL ON		
			DWG. 92X-5900-G-00257 AND		
			AS APPROVED VDS FOR SILT FENCE.		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

1700-C-34

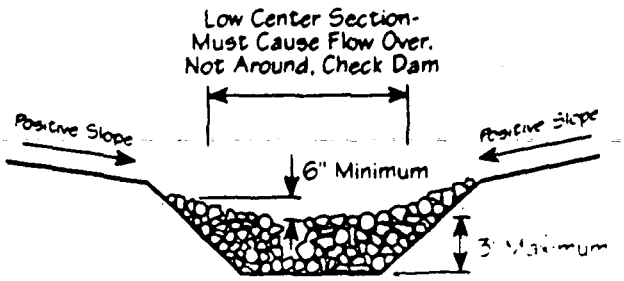
949

000196

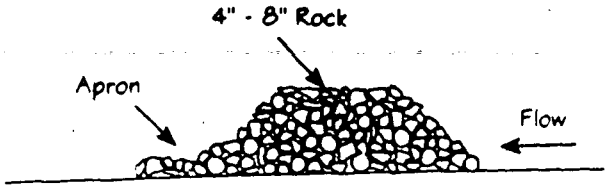
1700-034

Specifications
for
Check Dam

20110-SK-013



CROSS SECTION



PROFILE

1. The check dam shall be constructed of 4-8-in.-diameter stone, placed so that it completely covers the width of the channel.
2. The top of the check dam shall be constructed so that the center is approximately 6 in. lower than the outer edges, so water will flow across the center and not around the ends.
3. The maximum height of the check dam at the center of the weir shall not exceed 3 ft.
4. Spacing between dams shall be as shown in the plans.

Author: Frank Johnston at FNST-04
Date: 6/5/97 12:08 PM
Priority: Normal
Receipt Requested
TO: James Jenkins at FNST-02
TO: Uday Kumthekar at FNST-02
TO: Rick Mcguire at FNST-03
CC: Christine Messerly at FNST-02
CC: Michael Hickey at FNST-02
Subject:

---------- Message Contents ----------

I have the following concerns with the erosion and sediment controls for the leachate conveyance system project:

* I have yet to see the Surface Water Management and Erosion Control Plan (SWMEC) required by Section 1.04 B. of Spec. 02270-1.

* The E&S controls specified in the CFC package of 11/5/96 are inconsistent with the ODNR Manual. Spec. Section 02270 Section 1.03 Clearly refers to the ODNR Manual as the standard (see also Sections 2.01, 2.04 and 3.01)

* The plans show the use of straw bale barriers for use as inlet control and sheet flow control. The ODNR manual does not recognize straw bale barriers as acceptable for these applications. Silt fencing is required. Additionally, check dams detailed on pln. sht. G-00257 detail an ODOT design which is also inconsistant with the ODNR manual.

I have no record which would indicate that OEPA has revied and approved these deviations from the ODNR Manual. In fact, OEPA has been quite adamant about adhering to the ODNR Manual.

I need the path forward to address these situations ASAP.

Frank - 5294

OhioEPA
State of Ohio Environmental Protection Agency
Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402-2911
(513) 285-6357
FAX (513) 285-6249

DEC 0 1996

1111 24 c: M Hickey J Jenkins 349 F2-L
Mike/Jim
Haul Rt would be good candidate for hybrid check dam demonstration Please consider DTG

George V. Voinovich
Governor

November 18, 1996

RE: DOE FEMP
MSL 531-0297
HAMILTON COUNTY
ROCK CHECK DAMS

Mr. Johnny Reising
U.S. Department of Energy
Fernald Area Office
P.O. Box 538705
Cincinnati, Ohio 45253-8705

Dear Mr. Reising:

On November 7, 1996, I met with Frank Johnston, Greg Jones, and Steve Garland (FDF) to discuss the requirements for rock check dams. Out of that discussion came the query whether rock used in a check dam in a contaminated area could be reused in a check dam in another contaminated area. It was pointed out that this could provide a large savings in both money for additional rock that would not have to be purchased and in space in the OSDF. There was a concern that Ohio EPA would prohibit the transport and reuse of rock in this situation. **The purpose of this letter is to inform you that reuse of the rock from a rock check dam in a contaminated area in another contaminated area will be allowed.**

Also in this meeting, Mr. Garland explained the advantages of hybrid check dams (i.e., hay bales on the outside edges) in certain situations. Mr. Garland felt that those check dams used for only one season in some areas would work adequately. In addition, the site would realize a large savings in money and space in the OSDF through the use of these hybrid check dams. We have offered to review a demonstration project, should Mr. Garland propose one, for evaluating the hybrid check dams for single season use in some areas. All other check dams must conform to the standards in *Rainwater and Land Development.*

Sincerely,

Joe Bartoszek
Environmental Specialist
Division of Surface Water, Water Quality Unit

JB/br

cc: Tom Schneider, OFFO
Frank Johnston, FDF
Terry Hagen, FDF

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE -

(1)WP / WO NO.:	(2)S/C NO.:	(5)Pg OF	(6)DATE
1700	FSC-589	1 / 1	6/12/97

(3)S/C TITLE: Leachate Conveyance System — (11)RCI NO.:

(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☒ OTHER☐ — (4A)RCI/DCN TITLE: Pipe Embedment Detail — (11)DCN NO.: 1700-035

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00257	G0007	0	Also Drawing 90X-6000-M00065 Rev G RGB
DCN No. 1700-022 RGB			Also DCN No. 1700-32
20110-TS-0002 Section 02215 RGB	Part 3.03 RGB	0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Modify Typical Pipe Bedding Detail and Typical Pavement Restoration Detail to require 6" to 8" of pipe embedment material to cover pipe. (on Drawing G-00257) RGB Also details C AND 25 ON DRAWING M-00065 will require modification to show top of EMBEDMENT FILL. RGB

(10)REQUESTOR: Jeff Ellis — COMPANY: FDF — DATE: 6/12/97 — (12)FCE / PE: A.C. Jenkins — DATE: 6/12/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☑ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

Spec. 02215 Part 3.03 shall also be revised as follows:
Part 3.03.A.4 - Change 5 pounds per square inch ground pressure to 10 pounds per square inch ground pressure.
Part 3.03.C.4 - ~~Change~~ Add "place an additional 7 inch loose lift of embedment fill over the pipe and compact with 4 passes of an approved vibratory plate compactor." after the 3rd sentence. Change the next and last sentence to read "Do not compact on top of the pipe with heavy compaction equipment unless a minimum of ~~4~~ inches of backfill separates the compactor from the top of the pipe."

(REGISTERED) 20 RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Daniel G. Bolin 12 June 97 — DATE: — (20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CWP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) A.C. Jenkins for Uday Kumthekar — DATE: 6/12/97

PERFORMANCE GRADE: (17) 4

(18)CONSTRUCTION CONCURRENCE: Richard L McClure — DATE: 6/12/97 — (21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) — DATE:

PURCHASE REQUISITION REQUIRED: ☑ YES ☐ NO (19)

FS-F-4259 (10/01/96)

Carlton Schroeder (Parsons) 6/12/97 (see attached Page 1 of 1)

ORIGINAL

LEACHATE CONVEYANCE SYSTEM

DOCUMENT REVIEW COMMENT SHEET

P0164

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 6/19/97
DOCUMENT NO. AND TITLE: DCN-0375 PIPE EMBEDMENT DETAIL		DATE COMMENTS DUE:
REQUEST NO.: 1 / TRANSMITTAL No.: 1700-035		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC 1	COMMENT RESOLUTION
1	Y. AFSHAR		NO EXCEPTION TAKEN.* GEOSYNTEC WHO HAS WRITTEN THE SPECS, SHALL REVIEW THE SUBMITTAL,		
			* SEE GEOSYNTEC RESPONSE (D. Bedine)		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

1700-035

FOUNDATION AND SYSTEMS Division

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.:	(2)S/C NO.:	(5)Pg 1 OF 3	(6)DATE
1700	589		06/13/97

(3)S/C TITLE: Leachate Conveyance System

(11)RCI NO.:

(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☒ OTHER☐

(4A)RCI/DCN TITLE: Steel Pipe Casings Under K-65 Trench

(11)DCN NO.: 1700-036

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Civil Sections and Details	92X-5900-G-00259	0	Section 7
Civil Details - Sheet 2 of 3	92X-5900-G-00257	0	Steel Pipe Casing Detail

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN - JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Existing Condition: 1) Section 7 on Drawing No. 92X-5900-G-00258 shows the steel pipe casing for the FG-6" line to be 10" nominal pipe size and a 6" nominal pipe size for the SN-3" line. The pipe casing for the 4"/8" leachate line was changed to 12" nominal pipe size per DCN No. 1700-023.
2) Section 7 shows the steel casings installed at various elevations.
3) The "Steel Pipe Casing" section shown on Drawing No. 92X-5900-G-00257 calls for the steel pipe casings to be 25 feet in length.

Proposed Change and Justification: 1) Change steel pipe casings for the FG-6" and SN-3" lines from 10" and 6" NPS respectively to 12" NPS. The minimum diameter steel casing recommended by the jacking and boring contractor (Midwest Mole, Inc.) is 12" NPS.
2) Change the elevations of the steel pipe casings for the FG-6", SN-3", DW-6" and FQ-12" lines to the same centerline elevation as the 4"/8" leachate line. This would eliminate the need for multiple bottom elevations for the jacking and boring pit and multiple elevation changes in the setup for the jacking and boring equipment.

(10)REQUESTOR:	COMPANY:	DATE:	(12)FCE / PE	DATE:
Richard L. McGuire	Fluor Daniel Fernald	6/13/97	James C. Jenkins	6/13/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons approved as noted comments, attached as Page 1 of 1.

2) RECORD AS-BUILT CONDITIONS

(PARSONS) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Carlton Schroeder	6/18/97	2CUP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 7/14/97

PERFORMANCE GRADE: (17) James C. Jenkins

(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
Richard L McGuire	6/23/97		

PURCHASE REQUISITION REQUIRED: ☑ YES ☐ NO (19)

FS-F-4259 (10/01/96)

ORIGINAL

received
JUL 16 1997

DCN 036

DCN-031

REQUEST FOR CLARIFICATION OF INFORMATION/ DESIGN CHANGE NOTICE SUPPLEMENT

(11) RCI NO.:	(11) DCN NO.: 1700-	(1) PROJECT/WO NO.: 1700	(5) PAGE 1 OF 2

RCI-INQUIRY / DCN-JUSTIFICATION, EXISTING CONDITION, & REQUESTED CHANGE (continued):

3) Change the length of the steel pipe casings from 25 feet to 20 feet. Since the casings come in 20 foot lengths, this will eliminate a weld on each casing. The weld would have to be performed in an enclosed space as defined by OSHA and could create a hazardous atmosphere in the jacking and boring pit.

RESPONSE (continued):

(7) DOCUMENTS AFFECTED	(7) DOCUMENT NOS.	REV.	(8) OTHER

FS-F-4260 (3/15/96)

18 June 97

SCEP PO164 Leachate Conveyance System

DOC. No.: DCN-031 ISSUE: 1 TRANSMITTAL No.: 1700-036
RE: K-65 Casing Pipe

Civil Comments are as follows:

1. Research into casing size does not indicate a minimum pipe diameter. There was a reference to casing pipe "...for sizes 6 5/8" (OD) and above....". This would indicate that the sizes indicated on the drawings were not uncommon. No exception will be taken to the larger (12") size provided the 1' clearance to the K-65 Trench is maintained and the casing pipe has a watertight seal with the carrier pipe.

2. It is preferred to keep the 18" vertical separation between the SN-3" and DW-6". However, no exception taken to having a common centerline elevation for the casing pipes provided;
   a. The 1' clearance to the K-65 Trench is maintained.
   b. The 4"/8" leachate line will have positive drainage to CO 10.
   c. The SN- 3" line starts to bend down at the maximum allowable bending radius at 10' beyond each end of the casing pipe in order to return to its 18" minimum vertical separation. Maximize the distance between the joints of the SN-3" line and the DW-6" line with no joints in the SN-3" line in the vertical bends.

3. No exception taken to changing the casing length to 20'.

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF	(6)DATE 6/17/97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E☒ M☐ C☐ OTHER☐	(4A)RCI/DCN TITLE: 480 VOLT FEED FROM BLDG. 77		(11)DCN NO.: 1700-037

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
90X-5500-E-00500		01	7/1/97
90X-5500-E-00502		01	7/1/97

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- PROPOSE TO DELETE 480 VOLT SERVICE FROM BLDG. 77 TO OSDF TRAILOR AREA
- NEW SERVICE WILL COME FROM BLDG. 78 UNDER A SEPARATE DCN FOR THE OSDF PHASE I CONTRACTOR (PETRO)

(10)REQUESTOR: J. C. JENKINS COMPANY: FDF DATE: 6/17/97	(12)FCE / PE James C Jenkins DATE: 6/17/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☒ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

(FDF - J. KERL) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: James E. Kerl 6-18-97 DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: ZCUP5
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C Jenkins DATE: 7/1/97	
PERFORMANCE GRADE: (17)	
(18)CONSTRUCTION CONCURRENCE: DATE: 7/14/97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:
PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)	

FS-F-4259 (10/01/96)

ORIGINAL

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF 2	(6)DATE 7/7/97
(3)S/C TITLE: Leachate Conveyance System			(11)RCI NO.: 1700-0XX
(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C X OTHER☐	(4A)RCI/DCN TITLE: Warning Tape Installation		(11)DCN NO.: 1700-038

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00257	G0007	0	
Specification 02667; 3.3.B.8.		0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9) X DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

In Spec 02667, change 3.3.B.8 to read: "Install trace wire continuous over top of pipe, **12" below finish surface (+/- 1")**; coordinate with Section 02200.".

Revise **BOTH** pipe trench details on dwg 92X-5900-G-00257 to reflect the relocated warning tape.

Construction Note: This places the warning tape ~27" below the final pavement elevations when the LCS trench is covered by the Haul Road.

(10)REQUESTOR: Jess Kellis	COMPANY: FDF	DATE: 7/8/97	(12)FCE / PE: J. C. Jenkins	DATE: 7/8/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☒ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

(PARSONS)

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder	DATE: 7/11/97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE 7/14/97

PERFORMANCE GRADE: (17) A James C. Jenkins

(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☐ YES ☒ NO (19)			

DCN 038 **ORIGINAL**

received 7-9-97

PARSONS
ERP PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:	
DCN-036	1	1700-038	7-10-97	
TITLE: WARNING TAPE INSTALLATION			OU NO. 2	P.O. No.: 164

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 7 / 11 / 97
DUE DATE

TO REVIEWERS:

1. Check the attached document against issued specifications to ensure that this document meets the intent of our specs.
2. Date and Initial this card, in red ink, as to the status.
3. Hand carry the attached document and this card to the Project Engineer.
4. If comments are needed, mark the original document in red ink.
5. The Project Engineer will return the completed document and card to Document Control.

Note: If you are in a remote location, call the Project Engineer for pick-up.

ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
• 1	CIVIL YUNUS AFSHAR	7/10/97	YA		
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
• 2	ENVIRONMENTAL, SAFETY, & HEALTH MIKE C.	7/11/97	MC		
	HVAC				
	GEOTECHNICAL				
• 3	QUALITY ASSURANCE Bill V	7/11/97			
• 4	PROJECT ENGINEER Carlton S.	7/11/97	CS		
	TITLE III MANAGER				
	PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

Transmitted to Client	Date:	Initials:
Document Control	Date:	Initials:
• ORIGINATING PROJECT DESIGN ENGINEER		C-SCHROEDER

SPECIAL INSTRUCTIONS:

4/97

ENG 023

000207

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1700	(2)S/C NO: FSC - 589	(5)Pg 1 OF 1	(6)DATE: 25June97
(3)S/C TITLE: Leachate Conveyance System			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	(4A)RCI/DCN TITLE: Manhole Embedment Fill		(11)DCN NO.: 1700-039

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
20110-TS-0002 Section 02215 Part 2.01.B.		0	
FP90D-692 R4 (Submittal No. 57 R4)	Shop Drawing No. FP90D-692-R4	4	Note No. 3 on referenced drawing
FP90D-693 R1 2 of 2 (Submittal No. 58R1) 1202 mc 7/1/97	Shop Drawing No. FP90D-693 R1 sheet 2	1	Note No. 3 on referenced drawing

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☐DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

(9) The Manhole Embedment Fill gradation is being modified. Add the following to the last sentence of Spec. Section 02215 Part 2.01.B. "except that the range of percent passing for the No. 4 sieve shall be 20 to 65. " Note 3 on the referenced shop drawings of VBS Submittal Nos. 25 R1, 57 R4 and 58 R1 will be affected, however, no change to shop drawings is necessary since the change does not affect fabrication and minor change to backfill does not violate the manufacturers design criteria.

(10) REQUESTOR: Daniel Bolin COMPANY: GeoSyntec 26June97 (12)FCE / PE: L.D. Kunstelier DATE: 7/3/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES (14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

GeoSyntec — RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Daniel Bolin 26June97 DATE: (20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 7/7/97

PERFORMANCE GRADE: (17) 5 James C. Jenkins

(18)CONSTRUCTION CONCURRENCE: DATE: 7-7-97 (21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

PURCHASE REQUISITION REQUIRED: ☐YES ☒NO (19)

FS-F-4259 (10/01/96)

ORIGINAL

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE-

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF 4	(6)DATE 6/27/97
(3)S/C TITLE: Leachate Conveyance System			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: EO MO CH OTHER	(4A)RCI/DCN TITLE: LCS Alignment Adjustment		(11)DCN NO.: 1700-040

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00266	G0004	1	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☐ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Shift the underground utilities westerly 10'± at Sta. 8+00± and taper alignment to meet proposed near Sta 6+50. Shift avoids fire hydrant and utility pole near Sta. 8+00±.

(10)REQUESTOR: Jeff Ellis COMPANY: FDF DATE: 6/27/97

(12)FCE / PE: [signature] DATE: 7/3/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES

(14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons Attached Comments - Page 1 of 1

(PARSONS) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: C. Schroeder DATE: 7/10/97

(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins DATE: 7/16/97

PERFORMANCE GRADE: (17) 5

(18)CONSTRUCTION CONCURRENCE: Richard L McKune DATE: 7/14/97

PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)

(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

FS-F-4259 (10/01/96)

ENTERED

DCN 040

ORIGINAL

received 7-7-97

DOCUMENT REVIEW COMMENT SHEET

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 7/9/97
DOCUMENT NO. AND TITLE: 1700-040, LCS Alignment Adjustment		DATE COMMENTS DUE:
REQUEST NO.:		

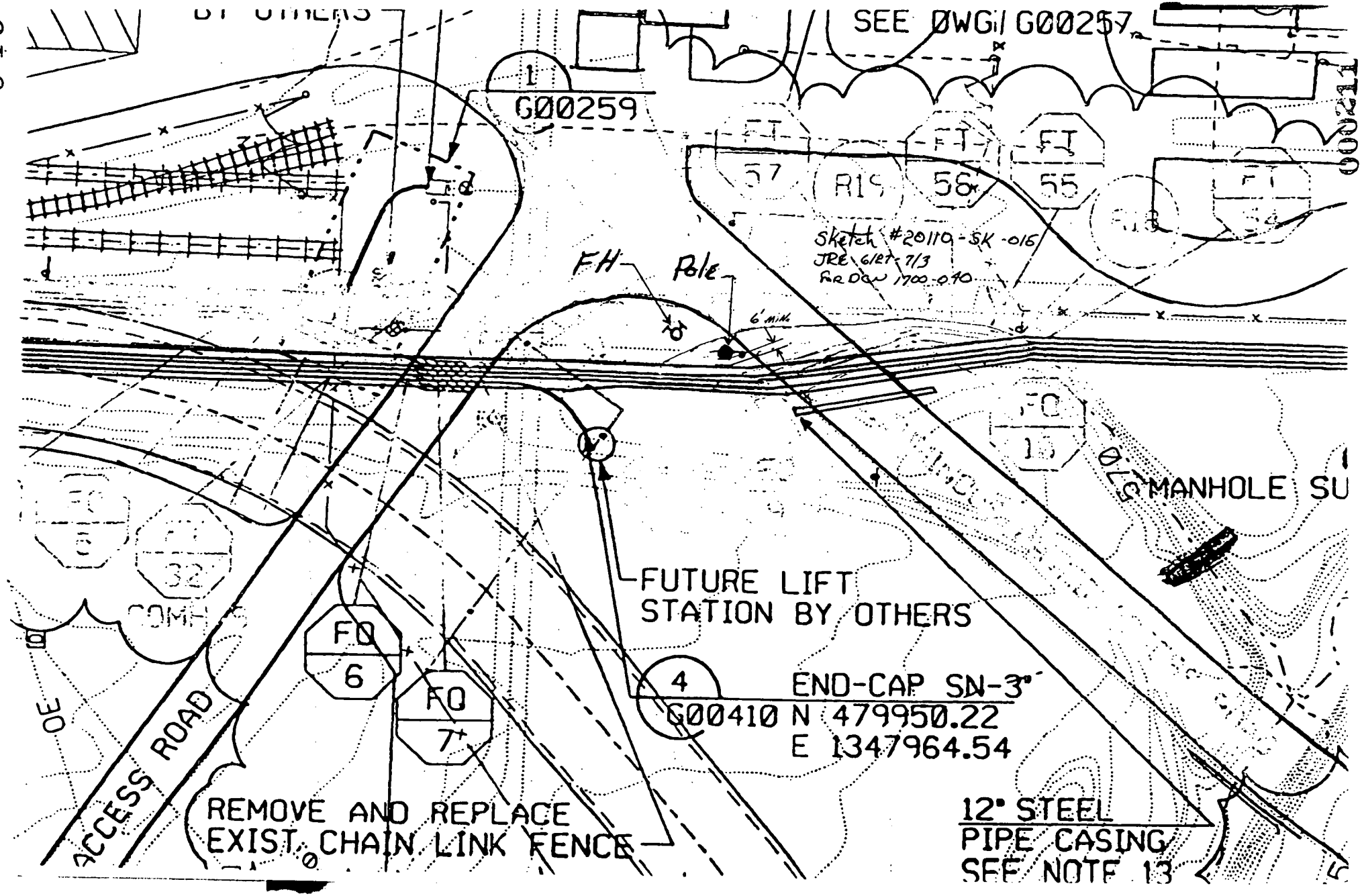
ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC /	COMMENT RESOLUTION
1	Y. AFSHAR		PROVIDE COORDINATES FOR THE FIRE HYD. & POWER POLE FOR AS-BUILT DWGS.		
			SHIFT UNDERGROUND UTILITY LINES 10-FT WESTERLY AT THE CROSSING POINT OF THE EXISTING PAVED ACCESS ROAD. RECORD DATA FOR AS-BUILT CONDITION.		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

0002000

FOUNDATION 3/93 32\IIII\3\VDS\blank

949


SEE DWG G00257
1
G00259
FT
57
R19
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Sketch #20119-SK-016
JRE 6/27-7/3
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STATION BY OTHERS
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END-CAP SN-3
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E 1347964.54
ACCESS ROAD
REMOVE AND REPLACE
EXIST. CHAIN LINK FENCE
12" STEEL
PIPE CASING
SEE NOTE 13

PARSONS
ERA PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:	
DCN.034	1	1700-040	7-8-97	
TITLE: LCS Alignment Adjustment			OU NO. 2	P.O. No.: 164

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 7 , 9 , 97
DUE DATE

TO REVIEWERS:

1. Check the attached document against issued specifications to ensure that this document meets the intent of our specs.
2. Date and Initial this card, in red ink, as to the status.
3. Hand carry the attached document and this card to the Project Engineer.
4. If comments are needed, mark the original document in red ink.
5. The Project Engineer will return the completed document and card to Document Control.

Note: If you are in a remote location, call the Project Engineer for pick-up.

ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
01	CIVIL Y. AFSHAR	7/9/97		YA	
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
• 2	ENVIRONMENTAL, SAFETY, & HEALTH M.CHROSDWK	7/9/97	NL		
	HVAC				
	GEOTECHNICAL				
• 3	QUALITY ASSURANCE B. UBBES	7/10/97	WW		
• 4	PROJECT ENGINEER C. SCHROEDER	7/10/97		CS	
	TITLE III MANAGER				
	PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

Transmitted to Client	Date:	Initials:
Document Control	Date:	Initials:
* ORIGINATING PROJECT DESIGN ENGINEER		C. SCHROEDER

SPECIAL INSTRUCTIONS:

6/97

ENG 123

000212

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC 589	(5)Pg 1 OF 1	(6)DATE 27 June 97
(3)S/C TITLE: Leachate Conveyance System			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	(4A)RCI/DCN TITLE: Cleanout Backfill Requirements		(11)DCN NO.: 1700-041

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Specification 20110-TS-0002 Section 02215		0	
Submittal No 74 R1			
Submittal No 24 R2			

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☐DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Cleanout Nos. 1A, 2, 3, 6, 7, 8, 9, 10, 12 and Temporary Cleanouts for the Gravity Line shall be backfilled with pipe bedding sand from the LCS pipe to the base of the cleanout. The pipe bedding sand shall be placed in 7 ± inch lifts and compacted with 4 coverages of approved vibratory plate compactor. Some hand tamping adjacent to the cleanout pipe and directly beneath the cleanout base will be necessary. Above the cleanout base trench backfill

(10)REQUESTOR:	COMPANY:	DATE:	(12)FCE / PE	DATE:
Daniel Bolino	GeoSyntec	21 June 97	L.A. Kunstreber JSB Ellis 7/8/97	6/30/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES (14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

→ shall be placed and compacted per specification section 02215 Part 3.03.C.6 and Part 3.03.C.7.

Add the above paragraph to Specification Section 02215 Part 3.03.E (New subsection)

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:	
Daniel Bolino	27 June 97	L.A. Kunstreber JRE 7/8/97	7/8/97
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY)			DATE:
PERFORMANCE GRADE: (17) A 5 James C. Jenkins			7/9/97
(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☐YES ☒NO (19)	7/9/97		

FS-F-4259 (10/01/96)

ORIGINAL

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

WP / WO NO.: 1700	S/C NO.: FSC 589	Pg 1 OF 1	DATE 7/15/97
S/C TITLE: Leachate Conveyance System			RCI NO.:
RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	RCI/DCN TITLE: Test/Acceptance Criteria for 6" Fuel Gas Piping		DCN NO.: 1700: 042

DOCUMENTS AFFECTED	DOCUMENT NOS.	REV.	OTHER
Parsons Specification Section 02667, Utility Lines	Section 02667, Part 3.4	0	

☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER ☒DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

EXISTING CONDITION:

The referenced specification provides requirements for installation of the gasline (FG) piping, but it does not address testing & acceptance criteria for this pipe following installation. Information obtained from the FDF Utility Engineer indicates that the existing gasline operating pressuse is 40 psi.

PROPOSED CHANGE:

Provide testing/acceptance criteria for the new gasline.

REQUESTOR:	COMPANY:	DATE:	FIELD CONSTRUCTION ENGINEER / PE	DATE:
Frank L. Flack	Fluor Daniel Fernald	7/15/97	James C. Jenkins	7/16/97

RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES FOR DCN: ☐APPROVED ☒APPROVED AS NOTED ☐DISAPPROVED

1) See Parsons attached Comments (Page 1 of 1) and their attachment (Pages 1 & 2 of 2)

(PARSONS) RCI - DCN ACCEPTANCE

DESIGN ORGANIZATION APPROVAL:	DATE:	CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Carlton C. Schroeder	7/17/97	N.A.

FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 7/21/97

PERFORMANCE GRADE: 5 James C. Jenkins

CONSTRUCTION CONCURRENCE:	DATE:	WORK COMPLETED: (SIGNOFF BY FIELD CONSTRUCTION ENGINEER OR PE) DATE:
Richard L. McGuire	7-21-97	

PURCHASE REQUISITION REQUIRED: ☐YES ☒NO

FS-F-4259 (10/01/96)

ORIGINAL

received
JUL 22 97

000214

LCS P0164

DOCUMENT REVIEW COMMENT SHEET

SME/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 7/17/97
DOCUMENT NO. AND TITLE: DCN NO: 1700/042 TEST/ACCEPTANCE CRITERIA FOR 6" FG PIPE		DATE COMMENTS DUE:
REQUEST NO.:		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC 1	COMMENT RESOLUTION
1.	Y. AFSHAR	•	SEE ATTACHED ASME B31.8-1992 EDITION SECTION 842.5 "TESTING PLASTIC PIPING AFTER CONSTRUCTION".		
		•	RECOMMEND A MINIMUM DURATION OF 2 HOURS AFTER [redacted] PRESSURE IN THE PIPE SYSTEM HAS STABILIZED.		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

0000215

949

stalled with the piping to facilitate locating it with an electronic pipe locator. Other suitable material may be employed.

842.432 Insertion of Casing

(a) The casing pipe shall be prepared to the extent necessary to remove any sharp edges, projections, or abrasive material which could damage the plastic during and after insertion.

(b) Plastic pipe or tubing shall be inserted into the casing pipe in such a manner so as to protect the plastic during the installation. The leading end of the plastic shall be closed before insertion. Care shall be taken to prevent the plastic piping from bearing on the end of the casing.

(c) That portion of the plastic piping exposed due to the removal of a section of the casing pipe shall be of sufficient strength to withstand the anticipated external loading, or it shall be protected with a suitable bridging piece capable of withstanding the anticipated external loading.

(d) That portion of the plastic piping which spans disturbed earth shall be adequately protected by a bridging piece or other means from crushing or shearing from external loading or settling of backfill.

(e) The piping shall be installed to provide for possible contraction. Cooling may be necessary before the last connection is made when the pipe has been installed in hot or warm weather. (See para. 842.396.)

(f) If water accumulates between the casing and the carrier pipe where it may be subjected to freezing temperatures, the carrier pipe can be constricted to the point where the capacity is affected or the pipe wall could be crushed and leak. To avoid this, one or more of the following steps shall be taken:

(1) the annulus between the carrier pipe and casing shall be kept to a minimum so that the increased volume of water changing to ice will be insufficient to crush the carrier pipe;

(2) provide adequate draining for the casing; or

(3) insert filler such as foam into the annulus between the casing and the carrier pipe.

842.44 Bends and Branches. Changes in direction of plastic piping may be made with bends, tees, or elbows under the following limitations.

(a) Plastic pipe and tubing may be deflected to a radius not less than the minimum recommended by the manufacturer for the kind, type, grade, wall thickness, and diameter of the particular plastic used.

(b) The bends shall be free of buckles, cracks, or other evidence of damage.

(c) Changes in direction that cannot be made in accordance with (a) above shall be made with elbow-type fittings.

(d) Miter bends are not permitted.

(e) Branch connections shall be made only with socket-type tees or other suitable fittings specifically designed for the purpose.

842.45 Field Repairs of Gouges and Grooves. Injurious gouges or grooves shall be removed by cutting out and replacing the damaged portion as a cylinder or repaired in accordance with para. 852.7.

842.46 Hot Taps. All hot taps shall be installed by trained and experienced crews.

842.47 Purging. Purging of plastic mains and service lines shall be done in accordance with the applicable provisions of paras. 841.275 and 841.276.

842.5 Testing Plastic Piping After Construction

842.51 General Provisions. All plastic piping shall be pressure tested after construction and before being placed in operation to prove its strength and to demonstrate that it does not leak.

Tie-Ins. Because it is sometimes necessary to divide a pipeline or main into sections for testing, and to install test heads, connecting piping, and other necessary appurtenances, it is not required that the tie-in sections of piping be tested. The tie-in joints, however, shall be tested for leaks.

842.52 Test Requirements

(a) The test procedure used, including the duration of the test, shall be capable of disclosing all leaks in the section being tested and shall be selected after giving due consideration to the volumetric content of the section and its location.

(b) Thermoplastic piping shall not be tested at material temperatures above 140°F, and reinforced thermosetting plastic piping shall not be tested at material temperatures above 150°F. The duration of the test of thermoplastic piping above 100°F, however, shall not exceed 96 hr.

(c) Sufficient time for joints to "set" properly must be allowed before the test is initiated.

(d) Plastic pipelines and mains shall be tested at a pressure not less than 1.5 times the maximum operating pressure or 50 psig, whichever is greater, except that:

(1) the test pressure for reinforced thermosetting plastic piping shall not exceed 3.0 times the design pressure of the pipe;

(2) the test pressure for thermoplastic piping shall

not exceed 3.0 times the design pressure of the pipe at temperatures up to and including 100°F or 2.0 times the design pressure at temperatures exceeding 100°F.

(e) Gas, air, or water may be used as the test medium.

842.53 Safety During Tests. All testing after construction shall be done with due regard for the safety of employees and the public during the test.

842.6 Copper Mains

842.61 Design of Copper Mains

842.611 When used for gas mains, copper pipe or tubing shall conform to the following requirements.

(a) Copper pipe or tubing shall not be used for mains where the pressure exceeds 100 psig.

(b) Copper pipe or tubing shall not be used for mains where the gas carried contains more than an average of 0.3 grains of hydrogen sulfide per 100 standard cubic feet of gas. This is equivalent to a trace as determined by the lead acetate test. (See para. 863.4.)

(c) Copper tubing or pipe for mains shall have a minimum wall thickness of 0.065 in. and shall be hard drawn.

(d) Copper pipe or tubing shall not be used for mains where strain or external loading may damage the piping.

842.612 Valves in Copper Piping. Valves installed in copper lines may be made of any suitable material permitted by this Code.

842.613 Fittings in Copper Piping. It is recommended that fittings in copper piping and exposed to the soil, such as service tees, pressure control fittings, etc., be made of bronze, copper, or brass.

842.614 Joints in Copper Pipe and Tubing. Copper pipe shall be joined by using either a compression type coupling or a brazed or soldered lap joint. The filler material used for brazing shall be a copper–phosphorous alloy or silver base alloy. Butt welds are not permissible for joining copper pipe or tubing. Copper tubing shall not be threaded, but copper pipe with wall thickness equivalent to the comparable size of Schedule 40 steel pipe may be threaded and used for connecting screw fittings or valves.

842.615 Protection Against Galvanic Corrosion. Provision shall be made to prevent harmful galvanic action where copper is connected underground to steel [see para. 862.114(a)].

842.62 Testing of Copper Mains After Construction

842.621 All copper mains shall be tested after construction in accordance with the provisions of para. 841.35.

843 COMPRESSOR STATIONS

843.1 Compressor Station Design

843.11 Location of Compressor Building. Except for offshore pipelines, the main compressor building for gas compressor stations should be located at such clear distances from adjacent property not under control of the company as to minimize the hazard of communication of fire to the compressor building from structures on adjacent property. Sufficient open space should be provided around the building to permit the free movement of firefighting equipment.

843.12 Building Construction. All compressor station buildings which house gas piping in sizes larger than NPS 2, or equipment handling gas (except equipment for domestic purposes) shall be constructed of noncombustible or limited combustible materials as defined in ANSI/NFPA 220.

843.13 Exits. A minimum of two exits shall be provided for each operating floor of a main compressor building, basements, and any elevated walkway or platform 10 ft or more above ground or floor level. Individual engine catwalks shall not require two exits. Exits of each such building may be fixed ladders, stairways, etc. The maximum distance from any point on an operating floor to an exit shall not exceed 75 ft, measured along the center line of aisles or walkways. Exits shall be unobstructed doorways located so as to provide a convenient possibility of escape and shall provide unobstructed passage to a place of safety. Door latches shall be of a type which can be readily opened from the inside without a key. All swinging doors located in an exterior wall shall swing outward.

843.14 Fenced Areas. Any fence which may hamper or prevent escape of persons from the vicinity of a compressor station in an emergency shall be provided with a minimum of two gates. These gates shall be located so as to provide a convenient opportunity for escape to a place of safety. Any such gates located within 200 ft of any compressor plant building shall open outward and shall be unlocked (or capable of being opened from the inside without a key) when the area within the enclosure is occupied. Alternatively, other facilities affording a similarly convenient exit from the area may be provided.

PARSONS
ERA PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:
		1700:042	7/16/97

TITLE:	PROJ. No.:	P.O. No.:
TEST/ACCEPTANCE CRITERIA FOR 6" FUEL GAS PIPING	002	164

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 7 / 17 / 97
DUE DATE

TO REVIEWERS:

1. Check the attached document against issued specifications to ensure that this document meets the intent of our specs.
2. Date and Initial this card, in red ink, as to the status.
3. Hand carry the attached document and this card to the Project Engineer.
4. If comments are needed, mark the original document in red ink.
5. The Project Engineer will return the completed document and card to Document Control.

Note: If you are in a remote location, call the Project Engineer for pick-up.

ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
• 1	CIVIL YUNUS AFSHAR	7/16/97		YA	
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
• 2	ENVIRONMENTAL, SAFETY, & HEALTH MIKE C.	7/17/97	DZ		
	HVAC				
	GEOTECHNICAL				
• 4	QUALITY ASSURANCE B. UBARES	7/18/97	WZH		
• 3	PROJECT ENGINEER C. Schroeder	7/17/97		CS	
	TITLE III MANAGER				
	PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

Transmitted to Client	Date:	Initials:
Document Control	Date:	Initials:

* ORIGINATING PROJECT DESIGN ENGINEER

SPECIAL INSTRUCTIONS:

5/96

ENG 123

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF 1	(6)DATE 7/17/97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: EO MO CX OTHER O	(4A)RCI/DCN TITLE: HYDROSTATIC TEST - MANHOLES		(11)DCN NO.: 1700-043

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
SPECIFICATION 20110-TS-0002	SECTION 02605, 3.07, B	0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- REQUEST VARIANCE FROM SPEC. THAT REQUIRES BACKFILLING AROUND HDPE MANHOLE BEFORE HYDROSTATIC TEST
- PROPOSE TO PERFORM HYDROSTATIC TEST PRIOR TO BACKFILL OR PRIOR TO MANHOLE INSTALLATION.
- ALL SAFETY REQUIREMENTS SHALL BE MET DURING TESTING.

(10)REQUESTOR: J.C. JENKINS	COMPANY: FDF	DATE: 7/17/97	(12)FCE / PE: James C. Jenkins	DATE: 7/17/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☒ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

ADD the following sentence after the first sentence of spec. section 02605 Part 3.07.B.2.

"Manholes may be hydrostatically tested prior to backfilling and installation when authorized by the Construction Manager."

(GEOSYNTEC) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carol Boden	DATE: 17 July 97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: N.A.

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE:

PERFORMANCE GRADE: (17) 5

(18)CONSTRUCTION CONCURRENCE: Richard L McGuire	DATE: 7-18-97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:

PURCHASE REQUISITION REQUIRED: ☐ YES ☑ NO (19)

FS-F-4259 (10/01/96)

ORIGINAL

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC- 597	(5)Pg 1 OF 1	(6)DATE 22 July 97
(3)S/C TITLE: Leachate Conveyance System			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	(4A)RCI/DCN TITLE: Cleanout Manhole Backfill Requirements		(11)DCN NO.: 1700-044

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Specification 20110-TS-0002 Section 02215	Part 3.03.B	0	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER
Civil Review Only

(9)☐DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

The backfill material requirements for Cleanout Manholes Nos. 1, 4, 5, and 11 have been simplified. Change Specification Section 02215 Part B by adding a new subpart 2 as follows:

2. For HDPE Cleanout Manholes Nos. 1, 4, 5, and 11 the backfilling procedure shall be as follows:
   a. Place pipe embedment fill material in 7-inch ± 1 inch thick loose lifts and compact with a minimum of 4 passes with an approved vibratory plate compactor.
   b. Place pipe embedment fill from 8-inches beneath the base of the manhole to the bottom of the concrete cover slab. The pipe bedding sand shall extend a minimum 3.5 feet horizontally from the sides of the manhole.
   c. Place compacted fill above the pipe embedment fill to finish grade in accordance with Section 02200. An exception to this may be Manhole No. 4, which if located in a paved area, shall be completed to grade in accordance with pavement restoration details and as directed by the Construction Manager.

Specification Section 02215 Part 3.03.B.1 shall be changed by adding the words " LCS/LDS " in front of HDPE Manholes... in the first sentence.

The changes made in this DCN comply with manhole manufacturer design criteria for manhole backfill.

(10)REQUESTOR: Daniel Bodine	COMPANY: GeoSyntec	(12)FCE / PE: James C. Jenkins	DATE: 7/23/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES

(14)FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Daniel Bodine	DATE: 23 July 97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5	
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins			DATE: 7/23/97
PERFORMANCE GRADE: (17) 5			
(18)CONSTRUCTION CONCURRENCE: Richard L McGuire	DATE: 7/23/97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☒YES ☐NO (19)			

FS-F-4259 (10/01/96)

ORIGINAL

RK 7/24/97

000220

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE - 949

3060

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF 1	(6)DATE 7/23/97
(3)S/C TITLE: Leachate Conveyance System			(11)RCI NO.: 1700-0XX
(4) RESPONSIBLE DISCIPLINE: EO MO CX OTHER O	(4A)RCI/DCN TITLE: Gravity Flow Segment Alignment Change		(11)DCN NO.: 1700-045

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
90X-6000-G-00058	G-8B	0	
90X-6000-G-00059	G-8C	0	

(9) ☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9) X DCN JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

DCB 19+15 19+65

1. Provide HOPE sleeve sta. ~~18+37±~~ to ~~18+87±~~ at grade to maintain flow line of 10/6 Leachate Transmission System (LTS) line.
2. Transition LTS line 10' left (east) of the ~~proposed~~ designed DCB centerline from sta. ~~18+87±~~ 19+65 to sta. ~~19+10±~~ 20+00 DCB.
3. Maintain 10' offset location from sta. ~~19+10±~~ 20+00 through sta. 27+75±.
4. Transition LTS line from 10' left to 22' right of the centerline from sta. 27+75± to sta. 28+65±.
5. Maintain 22' offset location from sta. 28+65± through sta. 33+00±.
6. Provide curves at transitions and to meet original alignment near sta. 33+80±.
7. Maintain ~~proposed~~ designed elevations of stations entering and exiting transitions, alter line grades to fit.
8. Record "As-Built" conditions.

(10)REQUESTOR:	COMPANY:	DATE:	(12)FCE / PE	DATE:
Jeff Kellis	FDF	7/23/97	James C. Jenkins	7/23/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

See Discussion and Comments on Attached Pages 2 and 3.

(GEOSYNTEC) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Daniel Bolling	25 July 97	2CUP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 7/28/97

PERFORMANCE GRADE: (17) 5 James C. Jenkins

(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGN OFF BY FCE OR PE)	DATE:
Richard L McClure	7/28/97		

PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)

ORIGINAL

EXCLUDE

00022

The purpose of this DCN is to improve and make easier the construction installation of the Temporary LTS line under existing site conditions. All stations mention in this response are based on the stationing given on the referenced drawings. The following reasons or justification are provided for the changes.

1. Avoid possible removal of existing fence along the closed north entrance road located approximately parallel to LCS Stations 28+65 to 33+00 (Drawing G-00059).

2.. Allow for additional construction safety along the east side of the constructed Sedimentation Basin by relocating the alignment 10 ft east from approximate LCS Station 20+00 to 27+75 (Drawing G-00058 and G-00059).

3. Route LTS line passed the inlet side of the Sedimentation Basin where the two 48-inch diameter CMPs have already been installed by the Phase 1 contractor. (Phase 1 Sedimentation Basin Drawing G-00075)

Comments on the requested changes by Item No. are as follows:

Item No. 8 This is standard procedure. Since different contractors may be involved for portions of the alignment changes FDF shall insure coordination of all as-builts.

Item No. 7 Proposed elevations should be designed elevations and these should be listed along with the approximate revised grades.

Item No. 6 License surveyor shall provide curve data and documentation as specified.

Item No. 5 Twenty two (22) ft offset is to the west or right as indicated and is acceptable.

Item No. 4 Ten (10) ft offset is to the east or left and is acceptable. Phase 1 contractor has already removed fence. Note, however, that the location of the revised trench alignment is approximately 15-ft from the toe of the existing stockpile. Excavation trench safety should be monitored closely.

Item No. 3 The 10-ft offset shall be maintained from approximate Station 20+00 through Station 27+75. The 19+10 station reference is a result of a field survey error.

Item No. 2 The 10 ft transition left or east of the designed centerline shall be from approximate Station 19+65 to Station 20+00.

(13) Response to DCN-1700-045

24 July 1997

Item No. 1 The HDPE sleeve to be provided has been selected by FDF Engineering to be a 20-inch OD pipe with approximate 2-inch wall thickness. The 50-ft long sleeve needs to be located approximately from Station 19+15 to Station 19+65. The station changes from those listed on page 1 are required because of field survey error. The HDPE sleeve must be installed such that when the 10-inch LTS is installed the invert and grade elevations are maintained. The annulus space above the 10-inch shall be filled with an insulating material and ends of the sleeve sealed. Insulating material is required because adequate depth of cover (approximately 1 ft of riprap) without insulation, is not being provided. Additional cover beyond the south end of the 20-inch pipe may be needed depending on construction completion of the Sedimentation Basin slopes.

The selection of the alignment to route the LTS line passed the inlet side (5 ft west of the basin end of the CMPs) is acceptable, because of the temporary nature of this portion of the LTS and the Sedimentation Basin.

Daniel Bodine
25 July 97

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 1700	(2)S/C NO.: 589	(5)PG OF 1 1	(6)DATE 7-24-97
(3)S/C TITLE: S/C589 LEACHATE CONTAINMENT			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: EQ MQ CX OTHER ☐	(4A)RCI/DCN TITLE: HDPE Pipe Protection		(11)DCN NO.: 1700-046

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
N.A.			
20110-TS-0002 Section 02605	Part 3.06		

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

REQUEST COMPENSATION FOR ARMAFLEX BLANKET TO KEEP PIPE FROM EXCESSIVE HEATING IN THE SUN. ARMAFLEX ROLL 4' WIDE x 1" THICK.

(10)REQUESTOR: M. Cleveland COMPANY: VILLAGE BUILDING DATE

(12)PCE / PE: James C. Jenkins DATE 7/25/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☒YES (14)FOR DCN: ☐APPROVED ☒APPROVED AS NOTED ☐DISAPPROVED

Design approval not required. QC will monitor pipe temperature when blanket use instead of ambient temperature.

(GEOSYNTEC) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Daniel Bodrie DATE 25 July 97

(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: N.A.

(16)FDP PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins DATE 7/25/97

PERFORMANCE GRADE: (17) 5

(18)CONSTRUCTION CONCURRENCE: Richard L. McRaven DATE 7/25/97

(21)WORK COMPLETED: (SIGNOFF BY PCE OR PE) DATE

PURCHASE REQUISITION REQUIRED: ☒YES ☐NO (19)

FS-F-4159 (10/01/96)

ORIGINAL

000224

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF 1	(6)DATE 07/29/97
(3)S/C TITLE: Leachate Conveyance System			(11)RCI NO.: 1700-0XXR
(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☒ OTHER☐	(4A)RCI/DCN TITLE: LTS Trench Alignment Change		(11)DCN NO.: 1700-047

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
90X-6000-G-00057	G-8A	0	
90X-6000-G-00058	G-8B	0	
90X-6000-G-00056 (W.O. 1702 Phase 1 Const.)	G-57A G-58	0 ?	
90X-6000-G-00074			

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9) ☒ DCN JUSTIFICATION: EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

1. Relocate the LTS curve PC 11+06.56 to PC 10+56.56 and PC 13+88.88 to PC 13+38.88. Maintain proposed deltas, radii, and courses.
2. Relocate Decon Stub-out to Sta. 12+75± to maintain alignment for ~~future construction~~ Piping connection to Phase 2 Decon Facility. Q&B
3. Maintain proposed grades for all relocated stations.
4. Record "As-Built" conditions.

(10)REQUESTOR:	COMPANY:	DATE:	(12)FCE / PE	DATE:
Jeffrey Ellis	FDF	7/29/97	James C. Jenkins	7/29/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

The purpose of the alignment change is to avoid existing fenced enclosure containing fencing debris. Phase 1 construction drawings (W.O. 1702) are also affected. Stub-out shall have a bottom of pipe elevation of 589.08 at the "tie-in" point (12 ft North of LTS alignment). The slope of the discharge pipe outside of the Decon Facility shall increase to approximately 29% to meet the LTS stubout at the tie-in point.

(Geo Synfab)

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Daniel Bodine		2CWP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE:

PERFORMANCE GRADE: (17) 5 James C. Jenkins 7/31/97

(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGN OFF BY FCE OR PE)	DATE:
Richard L Martin	7/31/97		
PURCHASE REQUISITION REQUIRED: ☑ YES ☐ NO (19)			

FS-F-4259 (10/01/96)

ADMINISTRATIVE

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF 2	(6)DATE 7/31/97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: EO MO CE X OTHER ☐	(4A)RCI/DCN TITLE: PNEUMATIC TESTING OF 6" FUEL GAS		(11)DCN NO.: 1700-048

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
DCN 1700:042			
PARSONS SPEC. SECTION 02667,			
UTILITY LINES	SEC. 02667, 3.4	0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- DCN 042 DOES NOT ADDRESS PNEUMATIC LEAK TEST TO THE SATISFACTION OF FDF. ie. B31.8 SECTION 842.5 DOES NOT ADEQUATELY ADDRESS SAFETY.
- PROPOSE TO USE ASME B31.3, SECTION 345.5, PNEUMATIC LEAK TEST AS THE REQUIRED CRITERIA. (SEE SHT. 2 OF 2)

(10)REQUESTOR: J.C. JENKINS	COMPANY: FDF	DATE: 7/31/97	(12)FCE / PE: James C. Jenkins	DATE: 7/31/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

See comments of 8/06/97, attached pages 1 & 2 of 2

(PARSONS) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE: 8/07/97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY)		DATE: 8/12/97
PERFORMANCE GRADE: (17) 5 James C. Jenkins		
(18)CONSTRUCTION CONCURRENCE: Richard L. McRae	DATE: 8/12/97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:
PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)		

FS-F-4259 (10/01/96)

ORIGINAL

received 8-4-97

required test pressure or 150% of design pressure. For this test, expansion joints which depend on external main anchors to restrain pressure end load shall be system tested in place. Self-restrained expansion joints may be tested in place or remotely. For test continuation above 150% of design pressure, the expansion joints may be provided with temporary restraint and tested in place or remotely. A metallic bellows expansion joint shall not be subjected to any pressure in excess of its shop test pressure. See para. 345.4.2 and Appendix X, para. X3.2.3(a).

345.3.4 Limits of Tested Piping. Equipment which is not to be tested shall be either disconnected from the piping or isolated by blinds or other means during the test. A valve may be used provided the valve (including its closure mechanism) is suitable for the test pressure.

345.4 Hydrostatic Leak Test

345.4.1 Test Fluid. The fluid shall be water unless there is the possibility of damage due to freezing or to adverse effects of water on the piping or the process. In that case another suitable nontoxic liquid may be used. If the liquid is flammable, its flash point shall be at least 120°F (49°C), and consideration shall be given to the test environment.

345.4.2 Test Pressure. Except as provided in para. 345.4.3, the hydrostatic test pressure at any point in a metallic piping system shall be as follows:

(a) not less than 1½ times the design pressure;

(b) for design temperature above the test temperature, the minimum test pressure shall be calculated by Eq. (24), except that the value of S_T/S shall not exceed 6.5:

$$P_T = \frac{1.5\,PS_T}{S} \qquad (24)$$

where

P_T = minimum test gage pressure
P = internal design gage pressure
S_T = stress value at test temperature
S = stress value at design temperature (see Table A-1)

(c) if the test pressure as defined above would produce a stress in excess of the yield strength at test temperature, the test pressure may be reduced to the maximum pressure that will not exceed the yield strength at test temperature. [See paras. 302.3.2(e) and (f). For metallic bellows expansion joints, see Appendix X, para. X3.2.3(a).]

345.4.3 Hydrostatic Test of Piping With Vessels[2] as a System

(a) Where the test pressure of piping attached to a vessel is the same as or less than the test pressure for the vessel, the piping may be tested with the vessel at the piping test pressure.

(b) Where the test pressure of the piping exceeds the vessel test pressure, and it is not considered practicable to isolate the piping from the vessel, the piping and the vessel may be tested together at the vessel test pressure, provided the owner approves and the vessel test pressure is not less than 77% of the piping test pressure calculated in accordance with para. 345.4.2(b).

345.5 Pneumatic Leak Test

345.5.1 Precautions. Pneumatic testing involves the hazard of released energy stored in compressed gas. Particular care must therefore be taken to minimize the chance of brittle failure during a pneumatic leak test. Test temperature is important in this regard and must be considered when the designer chooses the material of construction. See paras. 345.2.2(c) and F323.4.

345.5.2 Pressure Relief Device. A pressure relief device shall be provided, having a set pressure not higher than the test pressure plus the lesser of 50 psi (340 kPa) or 10% of the test pressure.

345.5.3 Test Fluid. The gas used as test fluid, if not air, shall be nonflammable and nontoxic.

345.5.4 Test Pressure. The test pressure shall be 110% of design pressure.

345.5.5 Procedure. The pressure shall be gradually increased until a gage pressure which is the lesser of one-half the test pressure or 25 psi (170 kPa) is attained, at which time a preliminary check shall be made, including examination of joints in accordance with para. 341.4.1(a). Thereafter, the pressure shall be gradually increased in steps until the test pressure is reached, holding the pressure at each step long enough to equalize piping strains. The pressure shall then be reduced to the design pressure before examining for leakage in accordance with para. 345.2.2(a).

[2]The provisions of para. 345.4.3 do not affect the pressure test requirements of any applicable vessel code.

DOCUMENT REVIEW COMMENT SHEET

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 8/06/97
DOCUMENT NO. AND TITLE: 1700-048, PNEUMATIC TESTING OF 6" FUEL GAS		DATE COMMENTS DUE:
REQUEST NO.:		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC /	COMMENT RESOLUTION
1	YUNUS AFSHAR		NO EXCEPTION TAKEN.* THIS DCN SUPERSEDES DCN NO. 1700-042.		
			* EXCEPT FOR 345.5.4. FOLLOW THE TEST PRESSURE REQUIREMENTS IN 842.5 KG 8/8/97		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

PARSONS
ERA PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:
DCN-048	1	1700-048	8/6/97
TITLE: PNEUMATIC TESTING OF 6" FUEL GAS		OU NO. 2	P.O. No.: 164

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 9 , 8 , 97
DUE DATE

TO REVIEWERS:

1. Check the attached document against issued specifications to ensure that this document meets the intent of our specs.
2. Date and Initial this card, in red ink, as to the status.
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ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
*	CIVIL YONUS AFSHAR	8/6/97		YA / as for KG.	
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
*	ENVIRONMENTAL, SAFETY, & HEALTH	8/8/97	MFC		
	HVAC				
	GEOTECHNICAL				
*	QUALITY ASSURANCE	8/7/97	[illegible]		
*	PROJECT ENGINEER	8/07/97		KMB	
	TITLE III MANAGER				
	PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

Transmitted to Client	Date:	Initials:
Document Control	Date:	Initials:
* ORIGINATING PROJECT DESIGN ENGINEER		C. SCHROEDER

SPECIAL INSTRUCTIONS:

See comments dated 8/06/97

4/97

ENG 123

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE - 049

(1)WP / WO NO.: 1700	(2)S/C NO.: F3C-589	(5)Pg 1 OF 2	(6)DATE 8/01/97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: EO MO CO OTHERO	(4A)RCI/DCN TITLE: STAVER DITCH PIPE INSTALLATION		(11)DCN NO.: 1700-049

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
DWG. 92X-5900-G-00266	SHT. 4	1	
DCN's 1700-032, 1700-035			
1698/99-018			

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- DUE TO FIELD CONDITIONS (30FT BASE) THE TRENCH CROSS SECTION (SEC. 6 ON G00266) FROM STA 9+25 + STA 13+00± SHALL BE CHANGED PER ATTACHED SKETCH 20110-SK-014.
- THE 4"/8" LEACHATE DESIGN AND LOCATION SHALL NOT BE CHANGED. BACKFILL WILL BE CONSTRUCTED PER TYPICAL DESIGN DWGS. AND DCN 1700-035
- THIS DCN WILL SUPERCEED DCN 1698/99-018 AND DCN 1700-032

(10)REQUESTOR: J. C. JENKINS COMPANY: FDF DATE: 8/01/97 (12)FCE / PE James C. Jenkins DATE: 8/01/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

See attached Comments - Page 1 of 1

(PARSONS - Y. AFSHAR) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder DATE: 8/11/97 (20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins DATE: 8/12/97

PERFORMANCE GRADE: (17) 5

(18)CONSTRUCTION CONCURRENCE: Richard L McClure DATE: 8/12/97 (21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)

FS-F-4259 (10/01/96)

DCN-049 PO164

ORIGINAL

received 8-4-97

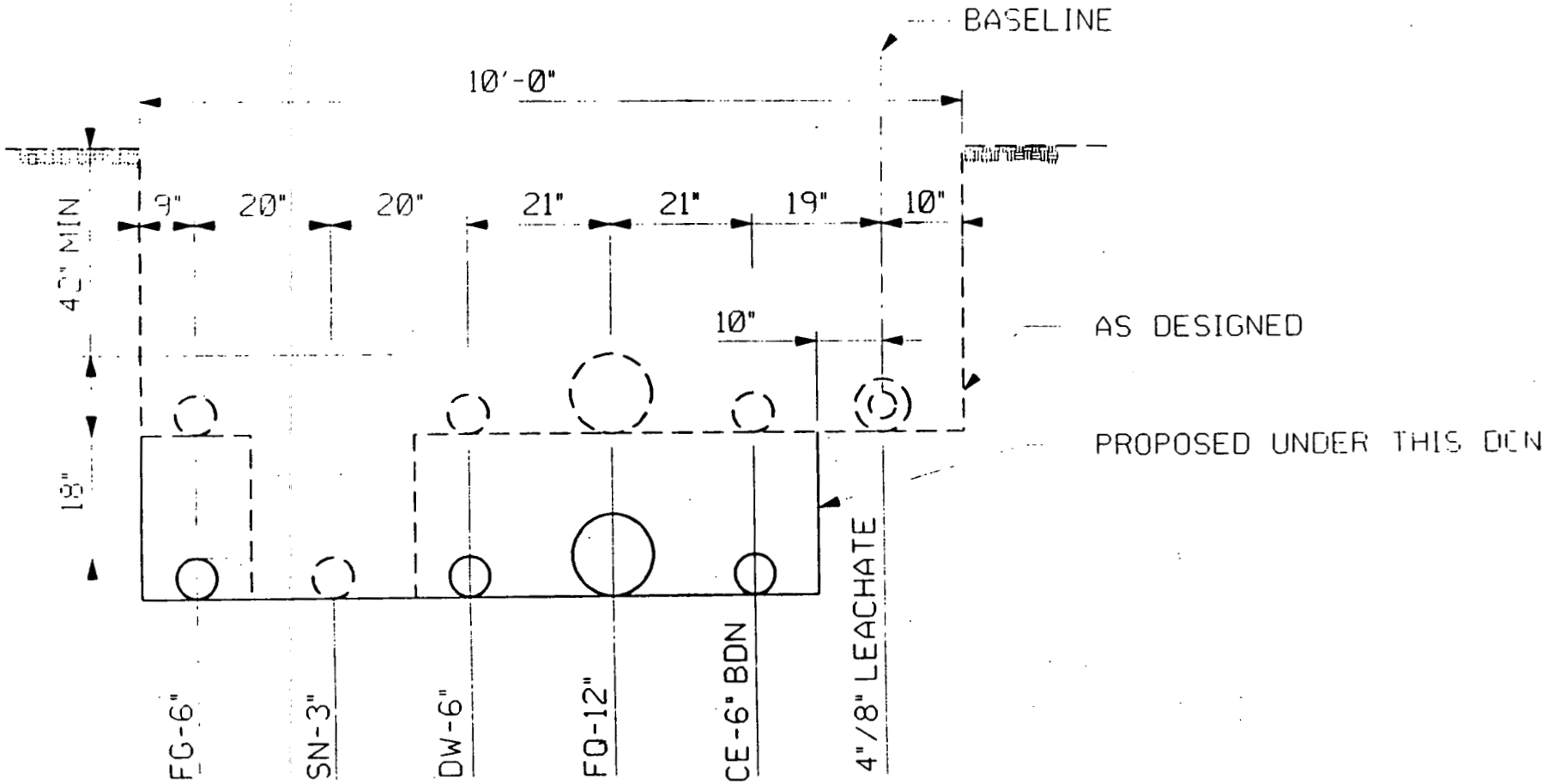
CCELR

000220

949

DCN NO: 1100-049
SKETCH: 20110-SK-014
Pg. 2 OF 2

0002321



SECTION 6 REF
NTS G00259 G00266

6 August 97

PO 164 - Leachate Conveyance System
DCN No.: 1700 - 049
STAVER DITCH PIPE INSULATION

RE: Drawings 92X-5900-G-00266
(FDF) 20110-SK-014

Recommend Status B, Approved as noted. Civil comments are as follows:

1. FDF sketch shows no vertical separation between the sanitary (SN-3") and potable water (DW-6") lines. This conflicts with the separation guidance provided in the "Ten State Standards" for sewer and water lines. When proper vertical and horizontal separation is impossible to obtain , Ten State Standards does state that both the water and sewer mains must be constructed of slip-on or mechanical joint pipe complying with public water supply design standards and be pressure tested to 150 psi to assure water tightness before backfilling.

   The above exception seems to be written for ductile iron pipe. An argument could be made that polyethylene pipe is at least equivalent to the exception above since it is a "jointless" system.

2. This DCN supersedes DCN No.: 1700-032 and DCN No.: 1698/99-018.

PARSONS
ERA PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:	
DCN 049	1	1700.049	8.8.97	
TITLE: STAVER DITCH PIPE INSTALLATION			PROJ. No.: 2	P.O. No.: 164

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 8 / 11 / 97
DUE DATE

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ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
• 1	CIVIL YUNUS APKHAR	8/6/97		YA	
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
• 2	ENVIRONMENTAL, SAFETY, & HEALTH M. CHOSDOWSKI	8/11/97	NR		
	HVAC				
	GEOTECHNICAL				
• 3	QUALITY ASSURANCE B. UBBES	8/11/97	WRU		
• 4	PROJECT ENGINEER C. SCHROEDER	8/11/97		CS	
	TITLE III MANAGER				
	PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

Transmitted to Client	Date:	Initials:
Document Control	Date:	Initials:
* ORIGINATING PROJECT DESIGN ENGINEER		C. SCHROEDER

SPECIAL INSTRUCTIONS:

5/96 ENG 123

000233

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 1700	(2)S/C NO.: FSC-589	(5)Pg 1 OF 2	(6)DATE 8/04/97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☒ OTHER☐	(4A)RCI/DCN TITLE: REVISED PIPING - AWWT AREA		(11)DCN NO.: 1700-050

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00266		1	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- PROPOSE TO USE HDPE PIPE WITH LONG RADIUS(S) TO REVISED LOCATION OF TRANSITION FITTINGS. (SEE ATTACHED SKETCH)
- TRENCH EXCAVATION AND NUMBER OF PIPES PRECLUDES USE OF DUCTILE IRON FITTINGS IN TRENCH
- ENSURE ALL PIPES HAVE 42" MIN. COVER

(10)REQUESTOR: J.C. JENKINS COMPANY: FDF DATE:	(12)FCE / PE James C. Jenkins DATE: 8/04/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

See Parsons Attached Comments - Page 1 of 1

(PARSONS) RCI - DCN ACCEPTANCE

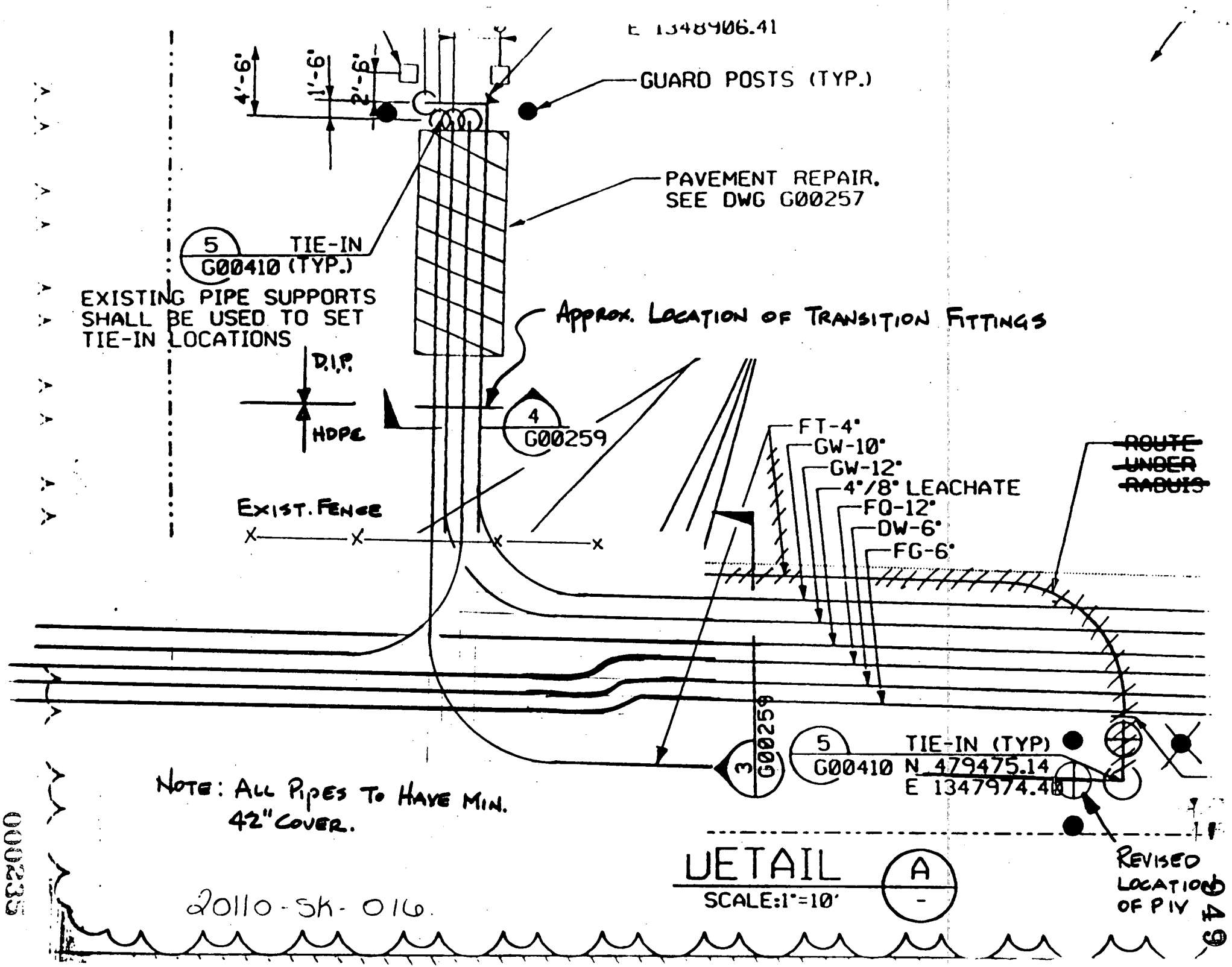
(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder DATE: 8/11/97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) PERFORMANCE GRADE: (17) 5 James C. Jenkins	DATE: 8/12/97
(18)CONSTRUCTION CONCURRENCE: Richard L. McKinney DATE: 8/12/97 PURCHASE REQUISITION REQUIRED: ☐ YES ☑ NO (19)	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

FS-F-4259 (10/01/96)

received 8 557

ORIGINAL

DCN-050


E 1348906.41
4'-6"
1'-6"
2'-6"
GUARD POSTS (TYP.)
PAVEMENT REPAIR.
SEE DWG G00257
5
G00410 (TYP.)
TIE-IN
EXISTING PIPE SUPPORTS
SHALL BE USED TO SET
TIE-IN LOCATIONS
APPROX. LOCATION OF TRANSITION FITTINGS
D.I.P.
HDPE
4
G00259
EXIST. FENCE
FT-4"
GW-10"
GW-12"
4"/8" LEACHATE
FO-12"
DW-6"
FG-6"
ROUTE
UNDER
RADUIS
3
G00256
5
G00410
TIE-IN (TYP)
N 479475.14
E 1347974.48
NOTE: ALL PIPES TO HAVE MIN.
42" COVER.
DETAIL A
SCALE: 1"=10'
REVISED
LOCATION
OF PIV
20110-SK-016.
000233

949

6 August 97

PO 164 - Leachate Conveyance System
DCN No.: 1700 - 050
REVISED PIPING - AWWT AREA

RE: Drawings 92X-5900-G-00266

Recommend Status B, Approved as noted. Civil comments are as follows:

1. There is not enough room to use long radius on the GW-10" and GW-12" lines (minimum radius would be 40 times pipe diameter)* and the excavation would be very wide. Suggest using 90° molded bends with thrust blocks. Using long radis on the FT-4" pipe is acceptable.

* Unless a smaller minimum radius is acceptable per pipe manufacturer. Transition of material should be on straight section and not under pavement.

KG.

PARSONS
ERA PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:
DCN050	1	1700-050	8-8-97
TITLE: REVISED PIPING - AWWT AREA		OU NO. 2	P.O. No.: 164

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 8 / 11 / 97
DUE DATE

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ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
• 1	CIVIL YUNUS AFSHAR / R GIRARD 8/8	8/6/97		YA/RG	
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
• 2	ENVIRONMENTAL, SAFETY, & HEALTH M. CHRISTOWSKI	8/11/97	NA		
	HVAC				
	GEOTECHNICAL				
• 3	QUALITY ASSURANCE B. VOBES	8/11/97	WVA		
• 4	PROJECT ENGINEER C. SCHROEDER	8/11/97		CS	
	TITLE III MANAGER				
	PROJECT MANAGER				

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Document Control	Date:	Initials:

* ORIGINATING PROJECT DESIGN ENGINEER C. SCHROEDER

SPECIAL INSTRUCTIONS:

4/97 ENG 123

000237

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1700	(2)S/C NO.: 589	(5)Pg 1 OF 1	(6)DATE 07/29/97
(3)S/C TITLE: LEACHATE CONVEYANCE SYSTEM			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: EO MO CO OTHERO	(4A)RCI/DCN TITLE: S.S PIPE AND SUPPORTS		(11)DCN NO.: 1700-051

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
90X-6000-M-00063	M-4A	0	
Tech. Spec. Section 15000-10 para	2.09B		
RCI 1700-024R & SUBMITTAL	No.: 042 R/1		(VBS-SSP-000 R1)

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☐ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Please advise if it is acceptable to use A312 "AS WELDED" 316L S.S Sch.40S pipe, in lieu of 316 S.S seamless pipe. Due to long lead delivery.

(10)REQUESTOR: COMPANY:	DATE:	(12)FCE / PE	DATE:
Mayur P. Kadakia VILLAGE BLDG. SERVICES, LLC	07/29	James C. Jenkins	8/04/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☒ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

(GEOSYNTEC) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Daniel Bodine	8 Aug 97	2CDP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 8/11/97

PERFORMANCE GRADE: (17) 5 James C. Jenkins

(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☐ YES ☒ NO (19)			

FS-F-4259 (10/01/96)

ORIGINAL

Design Change Notice (DCN) Report for Haul Road and Relocated North Entrance Road
Subcontract No. FY 587

DCN NO.	TITLE	DESCRIPTION	Transmitted to Agencies	
			U.S. EPA	OEPA
1698-001	DELETE 12" STEEL CASING AT DECON PAD	No longer required for future water line to decon pad.	8/18/97	8/18/97
1698/99-001	DELETE STRAW BALES	Delete the use of straw bales for erosion/sediment controls. Use additional stone in place of the straw bales.	8/18/97	8/18/97
1698/99-002	AT GRADE CROSSING	Remove pedestrian bridge from Haul Road Package. Replace with at grade crossing with gates, lighting and RAD coverage.	8/18/97	8/18/97
1698/99-003	WOVEN TYPE D (FX-55) Fabric	Woven geotextile to replace non woven to meet spec.	8/18/97	8/18/97
1698/99-004	SPEED LIMIT SIGNS - HAUL ROAD	Replace to 15 mph to conform to OEPA requirement for BAT for dust control.	8/18/97	8/18/97
1698/99-005	DO NOT PERFORM CONCRETE CYLINDER TESTING FOR CONCRETE POURS ON CATCH BASINS 12 AND 13.	VOIDED	N/A	N/A
1698/99-006	CONSTRUCTION AREA SIGNS	Revise sign language to "Roads Project" and give phone numbers for entry clearance.	8/18/97	8/18/97
1698/99-007	A-2000 SUBSTITUTE PIPE	Type B CMP conduit replaced with Type B A-2000 pipe along Haul Road and Rerouted North Entrance with as-built documentation.	8/18/97	8/18/97

Design Change Notice (DCN) Report for Haul Road and Relocated North Entrance Road
Subcontract No. FY 587

DCN NO.	TITLE	DESCRIPTION	Transmitted to Agencies	
			U.S. EPA	OEPA
1698/99-008	PLACEMENT OF GEOGRID	Additional excavation near station 155+50 to station 162+27. Use geogrid to "bridge" existing material for subgrade placement.	8/18/97	8/18/97
1698/99-009	RELOCATE GUYS - POLES #10 & 17	Move Guy lines to avoid OSDF Haul Road.	8/18/97	8/18/97
1698/99-010	SOIL WORKING AREA NORTH OF D&D	Provide information on how to place ("shape") soil undercut from station 155+50 to station 162+27 for work in place.	8/18/97	8/18/97
1698/99-011	DELETE GALVANIZED WIRE FENCE	Silt fence with no galvanized wire installed on Haul Road. DCN to allow installation and replace wire fence on North Entrance Road with no wire silt fence.	8/18/97	8/18/97
1698/99-012	EXCAVATION OF UNSUITABLE MATERIAL STA. 118+75 TO STA. 121+100	Undercut and remove unsuitable material for road construction. Place excavated material on fill slopes/areas.	8/18/97	8/18/97
1698/99-013	ROAD GRADE MODIFICATION	Lower finished grade elevation of road from station 130+50 to station 150+00 to reduce amount of fill needed. Original fill used on south portion of Haul Road to replace unsuitable material.	8/18/97	8/18/97
1698/99-014	SILT FENCE MODIFICATIONS	Silt fence modifications to provide necessary erosion control for existing conditions.	8/18/97	8/18/97

Design Change Notice (DCN) Report for Haul Road and Relocated North Entrance Road
Subcontract No. FY 587

DCN NO.	TITLE	DESCRIPTION	Transmitted to Agencies	
			U.S. EPA	OEPA
1698/99-015	EXCAVATION OF UNSUITABLE SOIL FROM STATIONS 122+30 TO 126.	Excavate structurally unsuitable soil from station 122+30 to station 126.	8/18/97	8/18/97
1698/99-016	UNSUITABLE MATERIAL STATION 118 TO 121	Removal of water "pockets" in area from station 118 to station 120. Install gravel drains to promote drainage.	8/18/97	8/18/97
1698/99-017	ADDITIONAL EXCAVATION	VOIDED	N/A	N/A
1698/99-018	STAVER DITCH TRENCHING	VOIDED (Superseded by DCN 1700-049.)	N/A	N/A
1698/99-019	DELETE UTILITY CASINGS, STA 128+25±	Delete 40 steel casings from scope of work due to utility relocation and installation schedule.	8/18/97	8/18/97
1698/99-020	CHANGE IN CONTROL AREA LIMITS	Move limits of controlled area due to less restrictive radiological control.	8/18/97	8/18/97
1698/99-021	BRIDGE CONTAMINATION STN. 155+50/162+27	Install stone with geogrid material between specified stations.	8/18/97	8/18/97
1698/99-022	SOIL PILE 1 USE	Excess soil that meets the OSDF WAC may be stored in Stockpile 1 as needed in accordance with the prescribed procedure.	8/18/97	8/18/97
1698/99-023	DITCH BACKSLOPE GRADE	Increase backslope of ditch in prescribed area to a maximum of 1.5:1 to prevent undermining a pole.	8/18/97	8/18/97

Design Change Notice (DCN) Report for Haul Road and Relocated North Entrance Road
Subcontract No. FY 587

DCN NO.	TITLE	DESCRIPTION	Transmitted to Agencies	
			U.S. EPA	OEPA
1698/99-024	D&D CROSS-SECTION AND PROFILE	VOIDED	N/A	N/A
1698/99-025	STA 148+15 CONDUIT	Provide and install conduit to avoid rainwater ponding.	8/18/97	8/18/97
1698/99-026	NORTH ACCESS STA 159+00 - 164+00 TYPICAL SECTION	Bridge over soft subgrade in the specified areas.	8/18/97	8/18/97
1698/99-027	STA 155+50-157+80 TYP. CROSS SECTION	Apply ODOT Tack Coat on top of existing concrete pad and use ODOT 30 bituminous aggregate for road base.	8/18/97	8/18/97
1698/99-028	GROSS DECON PAD	VOIDED (Superseded by DCN 1698/99-033)	N/A	N/A
1698/99-029	STA 129+45 UTILITY CONDUIT ELEVATION	Install the conduit at a higher elevation to avoid conflict with pipe from the Leachate Conveyance System Project.	8/18/97	8/18/97
1698/99-030	300' PAVEMENT REMOVAL	DISAPPROVED	N/A	N/A
1698/99-031	STA 139+00-156+00 GRADING	Construct one area of the Haul Road without scalping or excavation due to radiological soil concerns.	8/18/97	8/18/97
1698/99-032	STA 137+00 THROUGH 139+75 RIGHT DITCH	Delete ditch and grade to existing ditch and catch basin.	8/18/97	8/18/97
1698/99-033	GROSS DECON PAD RELOCATION II	This DCN supersedes DCN 1698/99-027 which has been voided. Relocate Gross Decontamination Pad.	8/18/97	8/18/97
1698/99-034	STA. 211+00 UTILITY SLEEVE	Install a conduit for future utility use.	8/18/97	8/18/97

Design Change Notice (DCN) Report for Haul Road and Relocated North Entrance Road
Subcontract No. FY 587

DCN NO.	TITLE	DESCRIPTION	Transmitted to Agencies	
			U.S. EPA	OEPA
1698/99-035	STA 164+05 CONDUIT EXTENSION	In order to avoid a telephone pole, install an angled pipe extension instead of a straight one.	8/18/97	8/18/97
1698/99-036	300' PAVEMENT REMOVAL/ TRAFFIC CONTROL	WAITING FOR APPROVAL		
1698/99-037	STA 139+00 SUBBASE	Provides construction procedure for subbase preparation in areas of potential radiological contamination.	8/18/97	8/18/97

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.:	(2)S/C NO.:	(5)Pg OF	(6)DATE
1698	FSC-587	1 1	11-27-96

(3)S/C TITLE: HALL ROAD & RELOCATED NORTH ENTRANCE ROAD

(11)RCI NO.:

(4) RESPONSIBLE DISCIPLINE: EO MO CE OTHER O

(4A)RCI/DCN TITLE: DELETE 12" STEEL CASING @ DECON PAD

(11)DCN NO.: 1698-001

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
CIVIL PLAN & PROFILE SHT: 5/5	92X-5900-G-00189	0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

THE 12" STEEL CASING SLEEVIE WHICH IS SHOWN ON DRAWING NO. 92X-5900-G-00189 REV. 0 IS NO LONGER REQUIRED FOR A FUTURE WATER LINE TO THE GROSS DECON PAD. IT IS TO BE DELETED ON THIS DCN.

(10)REQUESTOR:	COMPANY:	DATE:	(12)FCE / PE	DATE:
Jim SALYERS	FDF	11-27-96	James C. Jenkins	11-27-96

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES

(14)FOR DCN: ☒ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
James C. Jenkins	12/3/96	2CRTT 2CUP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins DATE: 12/3/96

PERFORMANCE GRADE: (17) 5

(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
	12-5-96		

PURCHASE REQUISITION REQUIRED: ☐ YES ☒ NO (19)

FS-F-4259 (10/01/96)

ORIGINAL

000244

3648

949

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

SPK

(1)WP / WO NO.:	(2)S/C NO.:	(5)Pg OF	(6)DATE
1698 & 1699	1-SC-587	1 of 3	11-18-96

(3)S/C TITLE: HAUL ROAD & REROUTED NORTH ENTRANCE RD

(11)RCI NO.: (REF)

(4) RESPONSIBLE DISCIPLINE: EO MO CO OTHER O

(4A)RCI/DCN TITLE: DELETE STRAW BALES

(11)DCN NO.: 1698/1699-001

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
CIVIL TEMPORARY EROSION CONTROL SHT 1/2	92X-5900-G-00200	0	
CIVIL TEMPORARY EROSION CONTROL SHT. 2/2	92X-5900-G-00201	0	
CIVIL GENERAL DETAILS SHEET 2/2	92X-5900-G-00205	0	
CIVIL TEMPORARY EROSION CONTROL SHT 1/2	92X-5900-G-00253	0	
CIVIL TEMPORARY EROSION CONTROL SHT 2/2	92X-5900-G-00254	0	
CIVIL GENERAL DETAILS SHEET 1/2	92X-5900-G-00240	0	

(9) ☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9) ☒ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE _

DELETE THE USE OF STRAW BALES FOR EROSION/SEDIMENT CONTROLS.
THE USE OF STRAW IS NOT APPROVED BY THE OHIO E.P.A
USE ADDITIONAL STONE IN PLACE OF THE STRAW BALES.

REF-1698/99-003R

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 1

To ROXEY	From JIM SALYERS
Co.	Co.
Dept.	Phone # X5526
Fax # 3446	Fax #

(10)REQUESTOR: Jim Salyers COMPANY: FDR DATE: 11-18-96

(12)FCE / PE: Jim Salyers DATE: 1-22-97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES

(14)FOR DCN: ☐ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: J. C. Jenkins (N.A.) DATE: 1/22/97

(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CCR4

(16)FCE/PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) J. C. Jenkins DATE: 2/5/97

PERFORMANCE GRADE: (17) 4

(18)CONSTRUCTION CONCURRENCE: DATE:

(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

PURCHASE REQUISITION REQUIRED: ☐ YES ☒ NO (19)

FS-F-4259 (10/01/98)

DUPLICATE ORIGINAL

000245

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE

(1)WP / WO NO.:	(2)S/C NO.:	(5)Pg OF	(6)DATE
1698 & 1699	I-SC-587	2 of 3	11-18-96

(3)S/C TITLE: HAUL ROAD & RELOCATED NORTH ENTRANCE RD

(11)RCI NO.:

(4) RESPONSIBLE DISCIPLINE: EO MO CO OTHER

(4A)RCI/DCN TITLE: DELETE STRAW BALES

(11)DCN NO.: 1698/1699-001

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
CIVIL TEMPORARY EROSION CONTROL SHT 1/2	92X-5900-G-00200	8	
CIVIL TEMPORARY EROSION CONTROL SHT 2/2	92X-5900-G-00201	8	
CIVIL GENERAL DETAILS SHEET 2/2	92X-5900-G-00205	8	
CIVIL TEMPORARY EROSION CONTROL SHT 1/2	92X-5900-G-00233	9	
CIVIL TEMPORARY EROSION CONTROL SHT 2/2	92X-5900-G-00234	9	
CIVIL GENERAL DETAILS SHEET 1/2	92X-5900-G-00240	9	

(9) ☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9) DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

DELETE THE USE OF STRAW BALES FOR EROSION/SEDIMENT CONTROLS.
THE USE OF STRAW IS NOT APPROVED BY THE OHIO E.P.A
USE ADDITIONAL STONE IN PLACE OF THE STRAW BALES.

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 1

To ROXEY	From JIM SOLYERS
Co.	Co.
Dept.	Phone # X5526
Fax # 3446	Fax #

(10)REQUESTOR: Jim Solyers COMPANY: TPI DATE: 11-18-96

(12)FCE / PE: J. C. Jenkins DATE: 2/5/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☒ NO ☐ YES

(14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

- REPLACE STRAW BALES WITH ODOT ITEM 601.07 TYPE D FOR CHECK DAMS ONLY. REF. (1) 900240, 900233, 900234
- STRAW BALES FOR SILT BARRIER AS SHOWN. REF. (2) 900240, 900233, 900234 REMAIN
- SEE PARSONS ADDITIONAL RESPONSE, PAGE 1 OF 1
- RECORD AS BUILT-CONDITIONS

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder DATE: 1/31/97

(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CCR4

(16)FOF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) J. C. Jenkins DATE: 2/5/97

PERFORMANCE GRADE: (17) 4

(18)CONSTRUCTION CONCURRENCE: DATE:

PURCHASE REQUISITION REQUIRED: ☐ YES ☐ NO (19)

(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

FS-F-4253 (10/01/96)

DUPLICATE ORIGINAL

DCN #1

Page 2 for signature on block 15.

received ANK 1-29-97

DCN 1698/99 - 001
Parsons 949
Page 3 of 3

DCN-001 Issue 1 1698/1699 - 001 30 Jan 97
Haul Road & North Entrance Road
Delete Straw Bales

RE: Drawings 92X-5900-G-00200, G-00201, G-00205
G-00233, G-00234, G-00240

Recommend Status B, Approved as noted

Comments are as follows:

1. Using an all stone (ODOT Item 601.07 Type D)check dam in the ditch lines in lieu of straw or hay bales is acceptable. The stone replaces the straw/hay shown in the check dam detail.

2. Silt fence or stone check dams may be used in lieu of straw or hay bales around the upstream ends of North Entrance Road pipes 1,2, and 7.

3. Silt fence or stone check dams may be used in lieu of straw or hay bales around the catch basins for the Haul Road. See drawing G-00201, note 5 for locations.

4. Changes should be made on red-line drawings for inclusion on as-built drawings.

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE 949

(1) WP / WO NO.: 1698 | (2) S/C NO.: NA | (5) Pg 1 OF 1 | (6) DATE 11-26-96

(3) S/C TITLE: HAUL ROAD AND REROUTED NORTH ENTRANCE ROAD | (11) RCI NO.:

(4) RESPONSIBLE DISCIPLINE: E ☑ M ☐ C ☑ OTHER ☐ | (4A) RCI/DCN TITLE: AT GRADE CROSSING | (11) DCN NO.: 97-1698/002

(7) DOCUMENTS AFFECTED	(7) DOCUMENT NOS.	(7) REV.	(8) OTHER
CIVIL PLAN AND PROFILE SHEET 2/5 ELECTRICAL PLAN AND DETAILS	921-5900-C-00186 921-5900-E-02147	0 0	
STRUCTURAL FRAMING PLAN STRUCTURAL FRAMING SECTIONS & DETAILS PED BR.	921-5900-S-00334 921-5900-S-00335	0 0	
STRUCTURAL FOUNDATION PLANS, SECTS & DETAILS	921-5900-S-00326	0	

(9) C RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9) A DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

AS A RESULT OF VARIOUS REVIEW MEETINGS THE PEDESTRIAN BRIDGE HAS BEEN REMOVED FROM THE HAUL ROAD PACKAGE AS PREPARED BY PARSONS' ENGINEERING GROUP.

IN ITS PLACE WE ARE TO PROVIDE AN AT GRADE CROSSING WITH GATES, LIGHTING & RAD COVERAGE.

(10) REQUESTOR: [signature] COMPANY: Kiewit Perini Parsons Daniel Fernald DATE

(12) FCE / PE: [signature] DATE 3/6/97

(13) RESPONSE FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES

(14) FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

SEE PARSONS Attached ~~sheet~~ Approved as NOTED COMMENTS Sheets 1 of 2 and 2 of 2

97 MAR 12 PM 2:01

RCI - DCN ACCEPTANCE

(15) DESIGN ORGANIZATION APPROVAL: PARSONS Carlton Schroeder 3/19/97 DATE

(20) CHARGE NO. FOR CADD SERVICES TO INCORPORATE:

(16) FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) [signature] 3/10/97 DATE

PERFORMANCE GRADE: (17) 4

(18) CONSTRUCTION CONCURRENCE: [signature] 3-6-97 DATE

(21) WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE

PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)

FSF-4258 (10/01/96)

DUPLICATE ORIGINAL

000248

DCN 007 Rec. 3-12-97 PP

DOCUMENT REVIEW COMMENT SHEET

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 03/19/97
DOCUMENT NO. AND TITLE: AT GRADE CROSSING - HAUL ROAD (P0158)		DATE COMMENTS DUE:
REQUEST NO.: DCN 1698/99-002		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	BRC 1	COMMENT RESOLUTION
4	M. BARRINGER		RAD CONTROL & SURVEYS FOR WORKERS/ EQUIPMENT MUST MEET REQUIREMENTS OF 10 CFR 835. SURVEY AREA WILL NEED TO BE ENCLOSED FROM ENVIRONMENT FOR HP EQUIPMENT TO WORK. ANY OBSERVED RADIOACTIVE CONTAMINATION SHOULD BE OF A REMOVABLE (LOOSE) NATURE AND ~~NOT~~ A DECON / CHANGE AREA NEEDED (RM-0020)	✓	

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

DOCUMENT REVIEW COMMENT SHEET

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 3/18/97
DOCUMENT NO. AND TITLE: AT GRADE CROSSING - HAUL RD (P0158)		DATE COMMENTS DUE:
REQUEST NO.: DCN 1698/99 -002		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC /	COMMENT RESOLUTION
1	K. Geard		At grade crossing requirements to be determined and provided by FDF. FEMP Health & Safety should review.		
2.			Additional signage may be required inaddition to gates, lighting, and Rad coverage. Signs should conform to Ohio MUTCD, if used.		
3	J. L. Cooper		HOW DO WE ACCOMMODATE THE "ABANDONED DESIGN" WHEN THE PEDESTRIAN BRIDGE IS REMOVED?	✓	
			ALSO, WILL AREA LIGHTING REMAIN AFTER PROJECT IS COMPLETE, TO ALLOW FOR SAFE CROSSING OF THE TRACKS WITH BRIDGE REMOVED?		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

0002590

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE - 949

WP / WO NO.: 1698 / 1699	S/C NO.: FSC 587	Pg 1 OF 3	DATE 1/7/97
S/C TITLE:		RCI NO.:	
RESPONSIBLE DISCIPLINE: E ☐ M ☐ C ☒ OTHER ☐	RCI/DCN TITLE: WOVEN TYPE D (FX-55) FABRIC	DCN NO.: 1698/1699-003	

DOCUMENTS AFFECTED	DOCUMENT NOS.	REV.	OTHER
92x-5900-G-00217 [redacted]		0	
92x-5900-G-00219		0	
92x-5900-G-00182 [redacted]		0	
92x-5900-G-00184		0	

☐ RCI - INQUIRY ☐ PRE-SCREEN FOR USCG BY PROJECT ENGINEER ☒ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

IN ORDER TO MEET ODOT SECTION 712.09, TYPE D SPECIFICATIONS A WOVEN GEOTEXTILE (FX-55) IS SUBMITTED FOR APPROVAL, RATHER THAN THE NON-WOVEN WHICH WILL NOT MEET THE ENTIRE SPECIFICATIONS. PLEASE SEE A FURTHER DESCRIPTION ON ATTACHED SHEETS 2, + 3.

REQUESTOR: Andrew Brueggemann	COMPANY: BARRETT PAVING MATERIALS	FCE / PE: [signature]

RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES — FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

See attached Parsons "Approved as Noted" memo.
(Page 1 of 1)

RCI - DCN ACCEPTANCE

DESIGN ORGANIZATION APPROVAL: C. Schroeder 1/22/97	CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CCR4
FERMCO PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins 2/12/97	
PERFORMANCE GRADE:	
CONSTRUCTION CONCURRENCE: [signature]	WORK COMPLETED: (SIGNOFF BY FCE OR PE)
PURCHASE REQUISITION REQUIRED: ☐ YES ☒ NO	DATE:

FS-P-4259 (03/15/96)

ORIGINAL

DCN 003

received 1-9-97

949

December 20, 1996

Alex Saplala
Barrett Paving
7374 Main Street
Cincinnati, Ohio 45244

Re: Fernald Project FSC-587-1698 & 1699
Separation/Stabilization Fabric
Nonwoven Type D vs Woven Type D

Alex,

We wish to submit for approval our Carthage Mill's FX-55, a woven slitfilm geotextile meeting the Ohio DOT Section 712.09 Type D, specifically designed for separation/stabilization applications. We feel that this product offers several advantages over the FX-70HS, a nonwoven geotextile that meets the specification for Type D, excepting the elongation requirement.

In 1984 the Federal Highway Administration (FHWA) determined that in separation and/or stabilization applications, the primary function of a geotextile is to prevent the penetration of the aggregate into the subgrade. In order to perform properly, the FHWA established that the geotextile must possess sufficient grab tensile, mullen burst, puncture and trapezoidal tear strength properties.

Another factor, which is often overlooked, is the fabric's modulus. In short, modulus is a measure of a material's resistance to elongation (stretch) under load. In separation/stabilization applications a high modulus fabric will out-perform a low modulus fabric by reducing the likelihood of rutting and increase the total performance of the aggregate - fabric - soil system [1]. Simply put, the lower a fabric's elongation, the higher it's modulus. The higher a fabric's elongation, the lower it's modulus. High modulus (low elongation) is typical of woven geotextiles such as our FX-55. Low modulus (high elongation) is typical of nonwoven geotextiles, similar to the FX-70HS that has been approved for this use in prior applications.

[1] Robnett, Q.L., et. al., "Effect of Fabric Properties on the Performance and Design of Aggregate-Fabric-Soil Systems"; Second International Conference on Geotextiles.

2/3

Given this background, I wish to compare Carthage Mills' FX-55 geotextile(woven Type D) to the FX-70HS geotextile(nonwoven Type D) that was specified:

	FX-55	FX-70HS
Grab Tensile, lbs ASTM D-4632	200	200
Mullen Burst, psi ASTM D-3786	460	375
Puncture, lbs ASTM D-4833	105	105
Trapezoidal Tear, lbs ASTM D-4632	85	75
Elongation, % ASTM D-4632 (Note: low elongation = high modulus)	15	50

* Test Values as reported in the Geotechnical Fabrics Report 1995 Specifiers Guide.

As you can see, the FX-55 woven separation/stabilization geotextile compares favorably to the strength properties of the FX-70HS nonwoven material and, more importantly, possesses a much higher modulus. For these reasons I ask that you use the FX-55 for incorporation into this project.

If you have any questions or need further information please feel free to call me anytime at 800-543-4430.

Sincerely,

Dan Bonn
Carthage Mills

3/3

PARSONS
DCN-003
Page 1 of 1

949

21 Jan 97

RE: PO158 Haul Rd. & N. Entrance Rd.
Transmittal No.: 1698/1699 - 003
Woven Type D (FX-55) Fabric

Approved as Noted

1. The Carthage Mills letter to Alex Saplala of Barrett Paving, dated December 20, 1996 indicates the Trapezoidal Tear test as ASTM D-4632. ODOT test for Trapezoidal Tear is ASTM D 4533. Compliance for ASTM D 4533 needs to be confirmed.

2. The Carthage Mills letter to Alex Saplala of Barrett Paving, dated December 20, 1996 does not indicate results/compliance for ODOT 712.09, Type D material for Apparent Opening Size, ASTM D 4751, nor for Permeability, ASTM D 4491.

3. Per ODOT 712.09, Type D material, the manufacturer shall submit certified test data to cover each shipment of material.

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE -949

(1)WP / WO NO.: 1698/99	(2)S/C NO.: FSC 587	(5)Pg 1 OF 1	(6)DATE 1/28/97
(3)S/C TITLE: HAUL ROAD & REROUTED N. ENTRANCE ROAD PROJECT		(11)RCI NO.:	
(4) RESPONSIBLE DISCIPLINE: EX MO CO OTHER	(4A)RCI/DCN TITLE: SPEED LIMIT SIGNS - HAUL RD.	(11)DCN NO.: 1698/99-004	

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
HAUL RD. CIVIL PAVEMENT MARKING AND SIGNING SHT. 1 OF 2	92X-5900-G-00208	0	
" " " " SHT. 2 OF 2	92X-5900-G-00209	0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- SPEED LIMIT SIGNS VARY FROM 15MPH TO 20MPH.
- BEST AVAILABLE TECHNOLOGY (BAT) FOR FUGITIVE DUST CONTROL AS PROPOSED BY OEPA REQUIRES SPEED LIMIT AT 15MPH FOR PAVED ROADWAYS AND PARKING AREAS.
- HAUL RD. SIGNS R-10-36, R-10-~~38~~ 6, R-10-36 SHOULD READ:
  104+50, 156+00, 161+00
  SPEED LIMIT 15

(10)REQUESTOR: J. C JENKINS COMPANY: DCI DATE: 1/28/97 (12)FCE / PE DATE: 1-28-97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See PARONS Clarification Response page 1 of 1
2) Record As-Built Conditions

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: PARSONS	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Carlton Schroeder	1/31/97	2CCR4

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE:

PERFORMANCE GRADE: (17) 4 J. C. Jenkins 2/5/97

(18)CONSTRUCTION CONCURRENCE: Bill Zebrick 2/13/97 DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:
PURCHASE REQUISITION REQUIRED: ☐ YES ☒ NO (19)	

FS-F-4259 (10/01/96)

1997 JAN 29 PM 1:32

DCN #4

received 2-29-97

ORIGINAL

DCN-004 Issue 1 1698/99 - 004 30 Jan 97
Haul Road
Speed Limit Signs

RE: Drawings 92x-5900-G-00182, G-00208, & G-00209

Recommend Status B, Approved as noted

Comments are as follows:

1. The 20 mph speed limit to be posted is based on the alignment geometry for the design speed. The signs showing 15 mph are advisory speeds at curves, also based on road alignment. Reducing the speed limit to 15 mph would be acceptable from a road geometry perspective.

2. If the posted speed is to be reduced to 15 mph, the R-10-36 signs at sta. 104+50 R and at sta. 156+00 L&R will need to be changed as noted in the DCN. (Note that drawing G00209 shows a sign symbol at sta 156+00 R but is labeled as sta 161+00. Sign is to be installed at sta 156+00). The advisory speed plates, W-143-24, shown at sta 119+00 R and 132+00 L will not be required. This will reduce the square foot quantity for ODOT Item 630 80102 shown on drawing G00182.

3. Reducing the speed limit for improving dust control after construction is more of an administrative issue than a road design issue. However, it will impact the cycle time for transporting impacted material operations. Recommend that this issue be raised with the SCEP group involved in the excavation and remediation of the OU-2 areas and the operations of the OSDF.

4. Changes should be made on red-line drawings for inclusion on as-built drawings.

DOCUMENT REVIEW COMMENT SHEET

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE:
DOCUMENT NO. AND TITLE:		DATE COMMENTS DUE:
REQUEST NO.:		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC /	COMMENT RESOLUTION

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

C0257

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

WP / WO NO.: 1698/1699	S/C NO.: FSC 507	Pg 1 OF 2	DATE 3/4/97
S/C TITLE:		RCI NO.:	
RESPONSIBLE DISCIPLINE: EO MO CO OTHER O	RCI/DCN TITLE: "Construction Area Signs"	DCN NO.: 1698/1699-006	

DOCUMENTS AFFECTED	DOCUMENT NOS.	REV.	OTHER
PROJECT SPECIFICATIONS PART 8 SEC. 6.0, 6.1 (SIGNS)			

☐RCI - INQUIRY ☐PRE-SCREEN FOR USQD BY PROJECT ENGINEER ☒DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

PER JIM SALYERS.
REVISE SIGNS LANGUAGE TO STATE INFORMATION AS PER ATTACHED. VARIATION IN PLACEMENT FROM 50' TO 150' AROUND THE DEFINED CONST. AREA.
COST IMPACT WILL BE $1,210.00.

REQUESTOR: ALEX T. SAPUAIA COMPANY: FAFLUOR 3/4/97 FCE / PE: Jim Salyers 3-6-97

RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES FOR DCN: ☒APPROVED ☐APPROVED AS NOTED ☐DISAPPROVED

1) See Parsons Additional Comment on Attached Page 1 of 1

Carlton Schroeder (PARSONS) 6/4/97

RCI - DCN ACCEPTANCE

DESIGN ORGANIZATION APPROVAL: James C. Jenkins 3/4/97	CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
FERMCO PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY)	
PERFORMANCE GRADE: 4 J. C. Jenkins 3/4/97	
CONSTRUCTION CONCURRENCE: 3-6-97	WORK COMPLETED: (SIGNOFF BY FCE OR PE)
PURCHASE REQUISITION REQUIRED: ☒YES ☐NO	DATE:

FS-F-4259 (03/15/96)

received 5-23-97

1997 MAY 27 AM 9:33

ORIGINAL

ENTERED

DCN 006

CONSTRUCTION AREA

AUTHORIZED PERSONNEL ONLY

~~REROUTED NORTH ENTRANCE ROAD PROJECT~~
ROADS PROJECT

ENTRY IS ONLY PERMITTED AT DEFINED ENTRANCE POINTS

YOU MUST HAVE BEEN BRIEFED ON THE PROJECT SPECIFIC HEALTH & SAFETY REQUIREMENTS OF THIS PROJECT AND BE APPROVED BY CONSTRUCTION MANAGEMENT PRIOR TO ENTRY ~~TO~~ OF THIS CONSTRUCTION AREA

~~CONTACT: Lou Wehlitz PHONE 648-5230 OR BY CONSTRUCTION RADIO #741567 ON CHANNEL #2 TO OBTAIN PERMISSION FOR ENTRY~~

FOR ENTRY CALL : 648-5230 OR 648-5526 OR BY CONSTRUCTION RADIO # 741-567, 743-292 OR 741-548

The above sign shall be required at all entry points (gates) and along the construction perimeter fence line at or about 150 foot spacing.

sign specs:
same size as Area 1- Phase 1 signs
black border
black lettering
yellow background

top half of sign
shaded area to be black
lettering to be yellow

ORIGINAL

ENTERED

HAUL ROAD

DOCUMENT REVIEW COMMENT SHEET

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 6/4/97
DOCUMENT NO. AND TITLE: DCN 006 CONSTRUCTION AREA SIGNS		DATE COMMENTS DUE:
REQUEST NO.: 1 / TRANSMITTAL No.: 1698/99 -006		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC /	COMMENT RESOLUTION
1.	K. Gerard		This sign is a requirement by specifications not prepared by PARSONS. NO EXCEPTION IS TAKEN TO PROPOSED SIGN. Recommend Subcontractor be given specific Sign Size in lieu of the comment "SAME SIZE AS AREA 1-PHASE 1 SIGN".		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

0002260

FLORIDA1400-3000-32\DOCS\DVDS\Book

019

949

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE

WP / WO NO.: 1698 / 1699	S/C NO.: KSC 587	PG 1 OF 17	DATE 3/5/97
S/C TITLE: HAUL ROAD CONSTRUCTION / REROUTED NORTH ENTRANCE		RCI NO.:	
RESPONSIBLE DISCIPLINE: EO MO CO OTHER	RCI/DCN TITLE: A-2000 SUBSTITUTE PIPE	DCN NO.: 1698/99-007	

DOCUMENTS AFFECTED	DOCUMENT NOS.	REV.	OTHER
CIVIL GENERAL SUMMARY - NORTH RD	92X-5900-G-00217	Ø	
CIVIL GENERAL SUMMARY - HAUL RD	92X-5900-G-00182	Ø	
CIVIL DRAINAGE SUB SUMMARY - NORTH RD	92X-5900-G-00242	Ø	
CIVIL DRAINAGE SUBSUMMARY - HAUL RD	92X-5900-G-00210	Ø	

☐ RCI - INQUIRY ☐ PRE-SCREEN FOR USQD BY PROJECT ENGINEER ☒ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

BARRETT PAVING MATERIALS INC REQUESTS TO SUBSTITUTE THE TYPE B CMP CONDUIT W/ TYPE B A-2000 PVC PIPE. THE FOLLOWING PIPE WILL BE AFFECTED.; HAUL ROAD - 603-03100-10"; 603-04400-12". 603-10400-24". REROUTED NORTH ENTRANCE - 603-05900-15". 603-08900-21". 603-10400-24". 603-16900-30". ATTACHED ARE ODOT SPECIFICATIONS AND MATERIAL CERTIFICATIONS.

REQUESTOR: Christine Baumgartmann	COMPANY: Barrett Paving Materials	FCE / PE: J. C. Jenkins	3/5/97

RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons Attached Approved as noted comments
2) Record changes with documentation of AS-BUILT CONDITIONS

MAR 6 AM 10:47 1997

PARSONS

RCI - DCN ACCEPTANCE

DESIGN ORGANIZATION APPROVAL: Carlton Schroeder 3/7/97	CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CCR4
FERMCO PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) PERFORMANCE GRADE: 4 James C. Jenkins	3/10/97
CONSTRUCTION CONCURRENCE:	WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:
PURCHASE REQUISITION REQUIRED: ☐ YES ☐ NO 3-10-97	

FS-F-4259 (03/15/96)

received 3-5-97

ORIGINAL

DCN 007

949

CONTECH
CONSTRUCTION PRODUCTS INC.

2701 Northland Ctr. Drive, Suite 110
Cincinnati, Ohio 45246
513 771-0050
Fax: 513 771 0036

March 4, 1997

BARRETT PAVING - Fernald

RE: Fernald Haul Road

Dear Andy,

The attached fax will indicate that our A-2000 PVC pipe is specified and approved by ODOT "CONSTRUCTION AND MATERIAL SPECIFICATION" - 1997 Edition.

A2000 also meets ASTM F949.

On page 10 of the catalog data there is a height of cover table for HS-20 live loading. When compacted granular backfill material is used, the minimum cover to the bottom of a flexible pavement is 12 inches.

Please advise if you need additional information specification and design data are available on request.

Sincerely,
CONTECH CONSTRUCTION PRODUCTS INC.

Len E. Stahl
Regional Sales Engineer

LES:lrs

p.s. If loading is expected to exceed standard highway loading (HS-20), the minimum cover requirements will be greater and we should check the design.

ORIGINAL

ITEM 603 PIPE CULVERTS, SEWERS AND DRAINS

603.01 Description. This work shall consist of the construction or reconstruction of pipe culverts, sewers and drains hereinafter referred to as Type A, Type B, Type C, Type D, Type E and Type F Conduit. The work shall be in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans or established by the Engineer. This work shall include: excavating for pipe and foundations for same, including clearing and grubbing and the removal of all materials necessary for placing the pipe except removals listed separately; furnishing and placing granular or concrete bedding and granular backfill as required; constructing and subsequently removing all necessary cofferdams, cribs and sheeting; pumping and dewatering; sealing or banding all pipe joints where required; furnishing and installing all necessary pipe bends and branches of a type at least equal to the conduit of which they become a part; joining to existing and proposed appurtenances as required; performing leakage tests as specified; restoration of disturbed facilities and surfaces; and providing erosion control pads and animal guards on underdrain and farm drain outlets.

603.02 Materials. Pipe shall be the size and kind specified in the proposal and meet requirements of pertinent sections of 706 and 707.

When the kind of pipe is not specifically itemized, any of the kinds listed herein under the specified conduit type may be used. When 707.05 or 707.07 conduit is specifically itemized or permitted in the plans, conduit conforming to 707.04 and having a bituminous paved invert may be used provided the same corrugation profile and thickness listed in the plans are provided. Higher strength concrete or plastic pipe of the same type may be furnished where lower strength pipe is specified. A thicker metal pipe of the same corrugation profile and type may be furnished where a lesser thickness is permitted or specified.

As an alternate to 706.05, a precast reinforced concrete flat topped three-sided culvert (706.051) placed on precast slab bottom, or a precast reinforced concrete arch section (706.052), may be provided. These structures and slab bottoms shall comply with the pre-approved design from approved manufacturers on file with the Department. Manufacturers not approved may submit their structural design criteria and analysis method and structure details for approval. The manufacturer shall submit shop drawings for review and approval prior to manufacture.

Granular material Types 1, 2, or 3 (703.11) may be used when granular materials are required or permitted as an option. However, Type 3 granular material shall only be allowed when pumping operations do not control severe ground water problems. When allowed, the Type 3 granular material shall be used below the bottom of the pipe. The Type 3 material shall be provided at no additional cost to the Department.

Soil and granular embankment	203.02
Granular material Types 1, 2, and 3	703.11
Other materials shall be as follows:	
Concrete for bedding, collars, and encasement (Class C)	499 and 511
Reinforcing steel (bedding, collars, encasement)	509.02
Cement for mortar	701
Sand for mortar	703.03
Pipe joint filler	706.10 or 706.14
Resilient and flexible gasket joints	
Concrete, sewer and culvert	706.11
Vitrified clay, B & S	706.12
Reinforced Concrete Pipe	706.02

Size		Minimum D-load	
mm	(in)	kg	(lb)
300	(12)	100	(2000)
375	(15)	100	(2000)
450	(18)	62.5	(1250)
525	(21)	62.5	(1250)
600	(24)	62.5	(1250)
675	(27) or larger	50	(1000)

The metric equivalent size may vary with material type for the same English size pipe. This difference in sizes shall not be construed as an exclusion of a material type. The pipe supplied shall be the required size or one size greater. The kinds of pipe permitted for each of the designated types of conduit shall be as follows:

Type A Conduits -Culverts

Non-reinforced concrete pipe (Class 3)	706.01
Reinforced concrete pipe	706.02
Reinforced concrete pipe, epoxy coated	706.03
Reinforced concrete elliptical pipe	706.04
Precast reinforced concrete box sections	706.05
Precast reinforced concrete 3-sided flat topped culverts	706.051
Precast reinforced concrete arch sections	706.052
Vitrified clay pipe (extra strength only)	706.08
Corrugated steel conduits	707.01 or 707.02
Structural plate corrugated steel structures	707.03
Precoated, galvanized steel culverts	707.04
Bituminous coated corrugated steel pipe and pipe arches with paved invert	707.05 or 707.07
Fiber bonded bituminous coated corrugated steel pipe and pipe arches without paved invert	707.08
Fiber bonded bituminous coated corrugated steel pipe and pipe arches with paved invert	707.09
Corrugated aluminum alloy pipe	707.21 or 707.22
Aluminum alloy structural plate conduits	707.23
Corrugated steel box culverts	707.15
Corrugated aluminum box culverts	707.25

Type B Conduits-Storm sewers or sanitary under pavement.

Non-reinforced concrete pipe (Class 3)	706.01
Reinforced concrete pipe	706.02
Reinforced concrete elliptical pipe	706.04
Precast reinforced concrete box sections	706.05
Vitrified clay pipe (extra strength only)	706.08
Mortar lined corrugated steel pipe	707.11
Corrugated steel spiral rib pipe	707.12
Bituminous lined corrugated steel pipe	707.13 or 707.14
Corrugated aluminum spiral rib pipe	707.24
Corrugated polyethylene smooth lined pipe	707.33
Polyvinyl chloride plastic pipe (non-perforated)	707.41
Polyvinyl chloride corrugated smooth interior pipe	707.42
Polyvinyl chloride profile wall pipe	707.43
Polyvinyl chloride sanitary pipe	707.44
Polyvinyl chloride solid wall pipe	707.45
Polyvinyl chloride drain waste and vent pipe	707.46
Polyvinyl chloride ABS composite pipe	707.47
ABS drain waste and vent pipe	707.51
ABS sewer pipe	707.52
Ductile iron pipe (sanitary)	748.01
Polyvinyl chloride pipe (sanitary)	748.02

Type C Conduits - Storm sewers or sanitary not under pavement

Non-reinforced concrete pipe	706.01
Reinforced concrete pipe	706.02
Reinforced concrete elliptical pipe	706.04
Precast reinforced concrete box sections	706.05
Vitrified clay pipe	706.08
Mortar lined corrugated steel pipe	707.11
Corrugated steel spiral rib pipe	707.12
Bituminous lined corrugated steel pipe	707.13 or 707.14
Corrugated aluminum spiral rib pipe	707.24
Corrugated polyethylene smooth lined pipe	707.33
Polyvinyl chloride plastic pipe (non-perforated)	707.41
Polyvinyl chloride corrugated smooth interior pipe	707.42
Polyvinyl chloride profile wall pipe	707.43

Polyvinyl chloride sanitary pipe 707.44
Polyvinyl chloride solid wall pipe 707.45
Polyvinyl chloride drain waste and vent pipe 707.46
Polyvinyl chloride ABS composite pipe 707.47
ABS drain waste and vent pipe 707.51
ABS sewer pipe 707.52
Ductile iron pipe (sanitary) 748.01
Polyvinyl chloride pipe (sanitary) 748.02

Type D Conduits - Drive pipes and bikeways

Non-reinforced concrete pipe (Class 5) 706.01
Reinforced concrete pipe 706.02
Reinforced concrete elliptical pipe 706.04
Vitrified clay pipe (extra strength only) 706.08
Corrugated steel conduits ..... 707.01 or 707.02
Structural plate corrugated steel structures 707.03
Corrugated aluminum alloy pipe ..... 707.21 or 707.22
Aluminum alloy structural plate conduits 707.23
Corrugated polyethylene drainage pipe 707.32
Corrugated polyethylene smooth lined pipe 707.33
Polyvinyl chloride corrugated smooth interior pipe 707.42
Polyvinyl chloride profile wall pipe 707.43
Polyvinyl chloride sanitary pipe 707.44
Polyvinyl chloride solid wall pipe 707.45

Type E Conduits - Miscellaneous small drain connections and headers

Non-reinforced concrete pipe 706.01
Reinforced concrete pipe 706.02
Reinforced concrete elliptical pipe 706.04
Concrete drain tile extra quality 706.07
Vitrified clay pipe 706.08
Clay drain tile, extra quality 706.09
Corrugated steel conduit ..... 707.01 or 707.02
Corrugated aluminum alloy pipe ..... 707.21 or 707.22
Corrugated polyethylene drainage tubing 707.31
Corrugated polyethylene drainage pipe 707.32
Corrugated polyethylene smooth lined pipe 707.33
Polyvinyl chloride plastic pipe (non-perforated) 707.41
Polyvinyl chloride corrugated smooth interior pipe 707.42
Polyvinyl chloride profile wall pipe 707.43

Polyvinyl chloride sanitary pipe 707.44
Polyvinyl chloride solid wall pipe 707.45
Polyvinyl chloride drain waste and vent pipe 707.46
Polyvinyl chloride ABS composite pipe 707.47
ABS drain waste and vent pipe 707.51
ABS sewer pipe 707.52

Type F Conduits - Conduits on steep slopes; underdrain outlets

Corrugated steel conduits (steep slope conduit) ..... 707.05 Type C or 707.07 Type C
Corrugated aluminum alloy pipe (steep slope conduit) ..... 707.21 or 707.22
Corrugated polyethylene smooth lined pipe (underdrain outlets) 707.33
Polyvinyl chloride plastic pipe (non-perforated underdrain outlets) 707.41
Polyvinyl chloride corrugated smooth interior pipe (underdrain outlets) 707.42
Polyvinyl chloride solid wall pipe (underdrain outlets) 707.45

603.03 Excavation. The trench shall be excavated to a width to allow for the proper jointing of the conduit, and the placement and compaction of the backfill material. The minimum and maximum trench widths, when measured at the top of the conduit from the outside diameter of the conduit to the side of the trench wall, shall be between 150 mm (6 inches) and 380 mm (15 inches) respectively. The walls of the trench shall be vertical where feasible.

For pipe 1500 mm (60 inches) or over in diameter or rise, a trench width of 0.6 m (24 inches) on each side of the conduit will be permitted. For thermoplastic pipe a minimum trench width of the greater of either the pipe outside diameter plus 400 mm (16 inches), or the pipe outside diameter times 1.25 plus 300 mm (12 inches), shall be provided in lieu of the maximum trench widths required for Type B or C conduit.

For precast reinforced concrete box sections (706.05), precast reinforced concrete flat topped three-sided culvert (706.051), precast reinforced concrete arch (706.052), and corrugated aluminum and steel box culverts, a minimum trench width of 0.6 m (2 feet) on each side of the box section is required.

The foundation for the conduit bed shall be firm for its full length.

m m (12 inches + 1/8 inch) or one pipe diameter, whichever is greater.

9.3 Brittleness: The minimum weight of tup shall be 4.5 kg (10 pounds). The tup shall be dropped 3.0 m (10 feet).

10.1.2 100 mm, 150 mm, 200 mm and 250 mm (4, 6, 8, and 10 inch) diameter pipe may be marked "M252".

12.1 The manufacturer's certified test results shall be furnished in accordance with 101.061.

707.41 Polyvinyl Chloride Plastic Pipe. This specification covers smooth wall perforated polyvinyl chloride (PVC) plastic pipe and fittings with nominal sizes of 100, 150 and 200 mm (4, 6, and 8-inch) diameter. The pipe and fittings shall conform to ASTM F 758, Type PS 46 minimum, with the following additions:

7.2.4 The pipe shall have a minimum of four rows of perforations.

13.1 The manufacturer's certification and the report of test results shall be furnished.

707.42 Polyvinyl Chloride Corrugated Smooth Interior Pipe. This specification covers polyvinyl chloride (PVC) profile wall pipe with a smooth interior. This profile wall pipe consists of an outer corrugated wall fused to a smooth inner wall. This specification includes pipe, joints, and fittings for nominal 100, 150, 200, 250, 300, 375, 450, 525, 600, 675, 750, and 900 mm (4, 6, 8, 10, 12, 15, 18, 21, 24, 27, 30, and 36 inch) diameter. Sanitary sewer pipe shall comply with ASTM F 949 and storm sewer and drain pipe shall comply with ASTM F 949 or AASHTO M 304 with the following additions:

ASTM F 949

5.2.4 Perforations - Perforated pipe may be specified.

10.1 Certification - The Manufacturer shall furnish certified test data annually to the Laboratory or at any time when the method of manufacture is changes. A letter of certification shall be provided to cover each shipment of material verifying that it meets specification requirements.

707.43 Polyvinyl Chloride Profile Wall Pipe. This specification covers polyvinyl chloride (PVC) profile wall smooth flow sewer pipe

and fittings with integral bell joints. The inside diameters range from 100 mm through 1200 mm (4 through 48 inches).

(1) Storm sewer pipe from 100 mm to 375 mm (4 to 15 inch) diameter and sanitary sewer pipe and fittings shall comply with ASTM F 794, with the following additions:

7.5 Pipe Stiffness. The minimum pipe stiffness shall be 46 or greater.

10.5 Certification. The manufacturer shall furnish certified test data annually to the Laboratory, or at any time when the method of manufacture is changed. A letter of certification shall be provided to cover each shipment of material verifying that it meets specification requirements.

(2) Storm sewer pipe 450 mm (18 inch) diameter and greater shall comply with AASHTO M 304, with the following additions:

6.2 Internal sleeve joints shall not be permitted.

10.5 Certification. The manufacturer shall furnish certified test data annually to the Laboratory, or at any time when the method of manufacture is changed. A letter of certification shall be provided to cover each shipment of material verifying that it meets specification requirements.

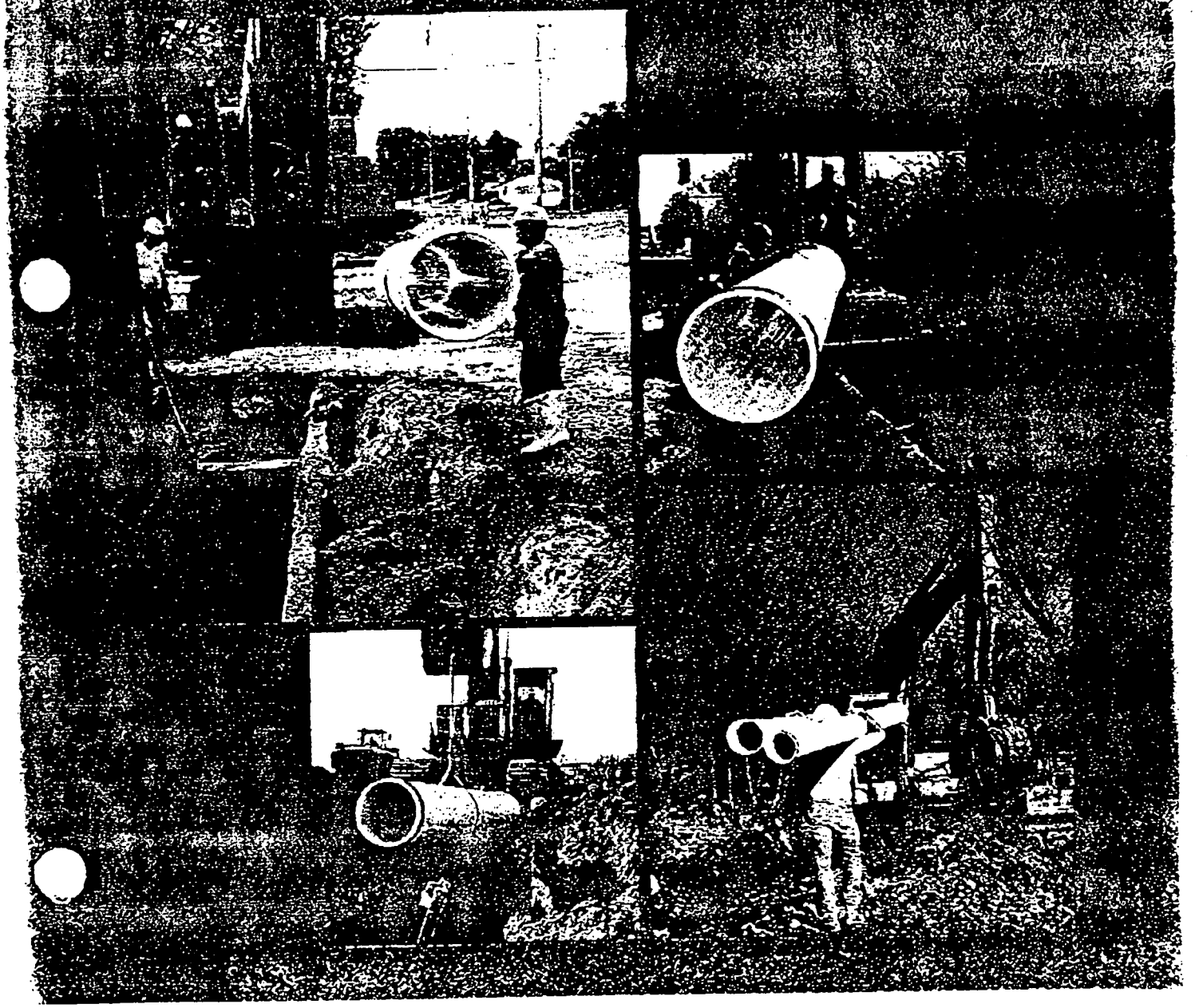
707.44 Polyvinyl Chloride Sanitary Pipe. This specification covers polyvinyl chloride (PVC) plastic pipe and fittings with nominal sizes of 100 mm through 375 mm (4 through 15 inches). The pipe and fittings shall conform to ASTM F 789 Type PS 46 minimum or SDR 35 with the following addition:

11.1 The manufacturer's certification and the report of the test results shall be furnished.

707.45 Polyvinyl Chloride Solid Wall Pipe This specification covers polyvinyl chloride (PVC) solid wall pipe and fittings with nominal sizes of 100 mm through 375 mm (4 though 15 inches). The pipe and fittings shall conform to ASTM D 3034 Type PS 46 minimum or SDR 35 with the following additions.

9.1 Inspection. Inspection shall be done at the project site.

CONTECH
CONSTRUCTION PRODUCTS INC.



A-2000...technologically advanced, field proven

CONTECH A-2000 represents the leading edge in sanitary sewer pipe technology and an impressive track record of field-proven performance. The latest in technology and engineering design has been coupled with time-proven materials and construction practices to form this cost-effective, flexible sewer piping system. With millions of feet successfully installed, A-2000's superior stiffness, joints, and quality are quickly making it the standard of the industry.

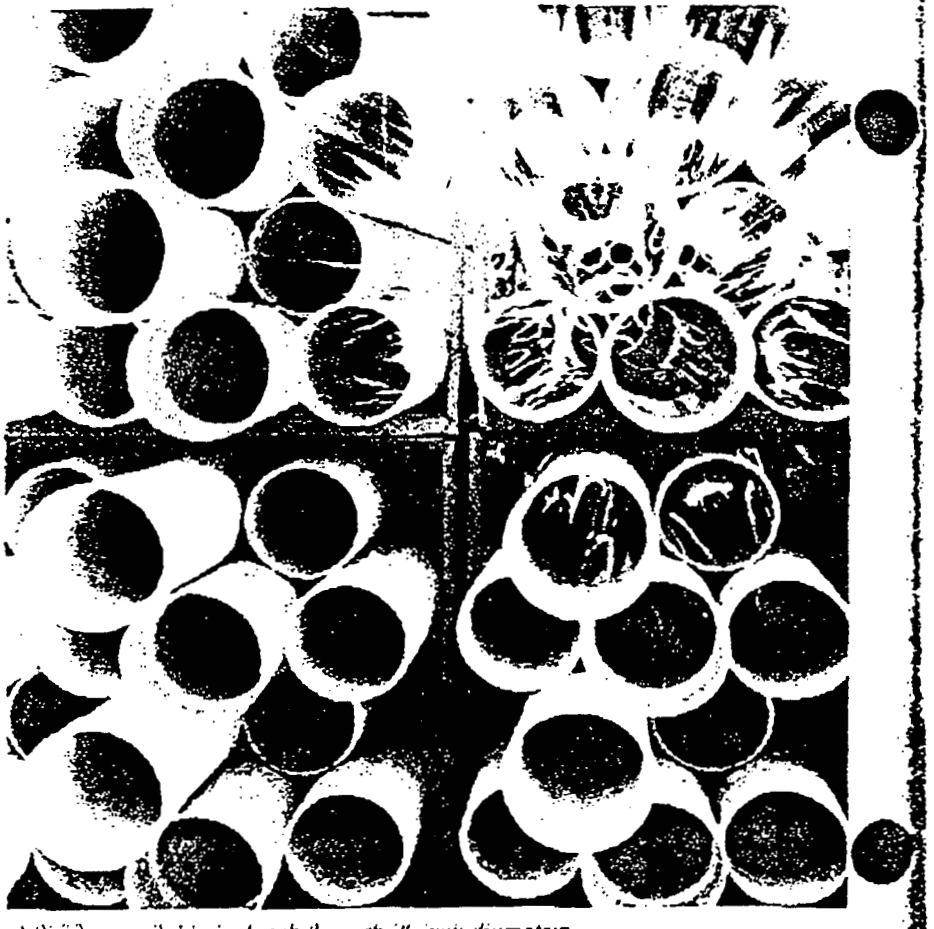
Built to withstand tough conditions

A-2000 is a profile wall pipe extruded with a smooth interior and corrugated exterior. It is made of polyvinyl chloride (PVC), the most widely accepted sewer pipe material. PVC provides excellent durability and resistance to abrasion and scouring, as well as corrosive attack from both acidic and alkaline soils. It is impervious to chemicals found in normal sewage and is not damaged by normal sewer cleaning practices.

Engineered for gravity flow applications to installed depths of 30 feet, A-2000 should be considered whenever you consider using SDR 35 PVC pipe. It has passed rigorous testing and meets the requirements of ASTM Specification F949-93a for the pipe and fittings. More importantly, A-2000 has proven itself in the trenches in a variety of applications for sanitary sewers, storm sewers, and subdrainage systems.

A-2000 is available in 4-inch through 30-inch diameters in standard 12½-foot (18-inch and smaller) and 13-foot (21-30 inch diameters) lengths. A complete line of fittings is also available. Like other flexible plastic sewer pipes, A-2000 is installed in accordance with ASTM D 2321-89.

A-2000 is tough enough to endure normal installation practices and deep backfills.



A-2000 is available in 4-inch through 30-inch diameters.

ORIGINAL

Designed for efficiency and savings

A-2000 can reduce your costs three ways: initial purchase price, installation cost, and maintenance cost.

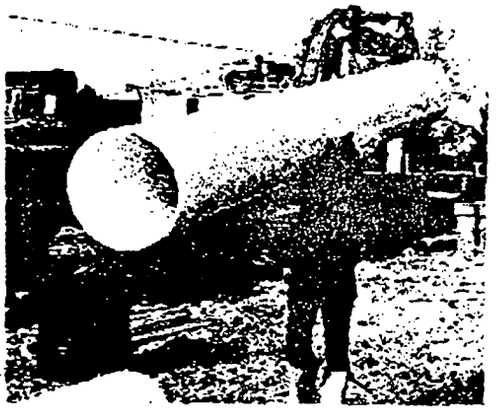
Even with its higher stiffness, the corrugated design of A-2000 is resin efficient. It is engineered to provide performance and long-term service as well as an initial material cost savings over conventional SDR 35 PVC pipes.

During installation A-2000 pays off again, with a combination of features that makes installation faster and easier. A lighter handling weight and easy-to-stab joint are just two of the many benefits. Field cuts are more easily made and the new spigot doesn't require field chamfering. With a gasketing system that is reusable, cut sections, pipe bells, and gaskets aren't wasted. These benefits help keep projects on schedule. Plus, A-2000 is often laid with smaller than normal crews—that's a real savings!

After installation and testing, A-2000 continues to save money. Its smooth interior makes it easy to clean and reduces the possibility of stoppages. Superior joints and gaskets stay tight, controlling infiltration and root penetration. A-2000's low filler resin compound also helps to ensure long-term strength and performance.

A-2000's added stiffness provides an extra edge on deflection control.

A-2000's unique gasketed joint design allows easier field assembly.



A-2000's light weight makes it easy to handle in the field.

Better deflection control

When it comes to other types of flexible piping on the market, A-2000 stands up to the test. In fact, it comes out on top.

A-2000 provides a minimum pipe stiffness of 50 psi...That's nearly 10 percent greater than SDR 35. This extra stiffness provides an extra edge on deflection control. When installed in accordance with ASTM D 2321-89, A-2000 provides excellent field deflection performance.

Even with its extra stiffness, A-2000 maintains its resiliency. When test-flattened to 40 percent of its normal diameter (60 percent deflection) per ASTM Test Method D 2412, A-2000 does not crack, split, or break.

ORIGINAL

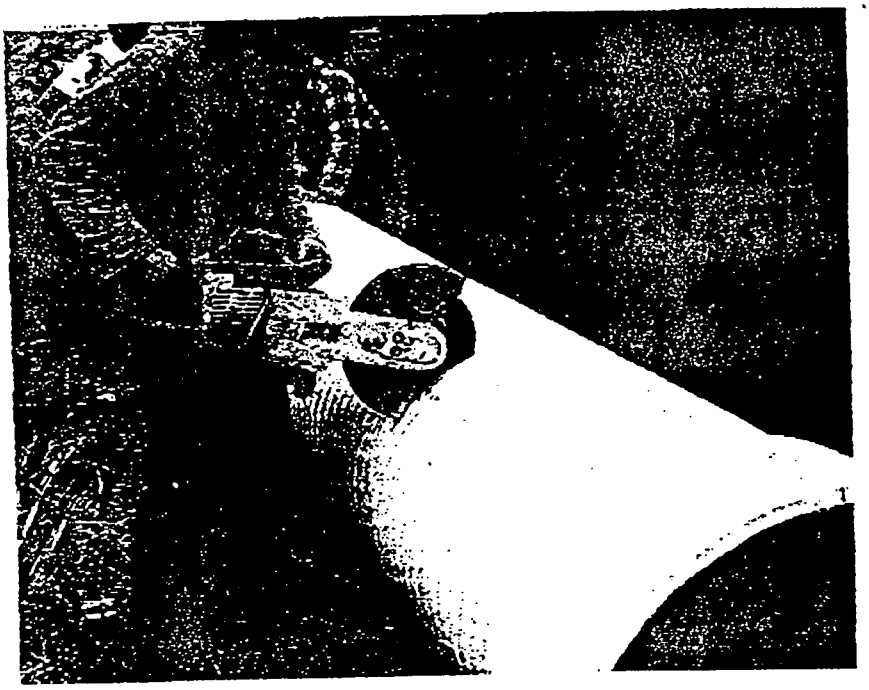
Engineered for performance

Better gasketed joints

A-2000's tight gasketed joint contributes to the integrity of the complete sewer system. Joint tightness greatly exceeds the requirements of ASTM D 3212. In fact, in joint deflection tests (as described by ASTM D 3212), A-2000 stays tight under deflections as great as 40 percent or more. That's a significant performance advantage. Although 40 percent deflections are not recommended or desired, A-2000 does provide that extra measure of reliability, not only to meet installation tests, but to provide continued watertight performance through-out the life of the system. A-2000 gaskets meet the requirements of ASTM F 477.

The circumferentially corrugated exterior of A-2000 provides a repeating gasket seat. Gaskets are shipped loose and should be field attached per the instructions on Page 9 and photo on Page 6. When necessary, field modifications are quick and easy. In the field, the pipe is simply cut to the desired length and a gasket snapped into the last two corrugations of the new spigot. No gaskets are wasted. No spigot end chamfering or beveling is required.

A-2000 gaskets are easily removed and attached on the pipe spigot. No spigot end chamfering or bevelling is required. No gaskets or pipe are wasted.



Field modifications with A-2000 are quick and easy. The circumferentially corrugated exterior creates a cutting "guide" to provide even, square pipe cuts every time. A-2000 can be easily cut with a hand or power saw.

ORIGINAL

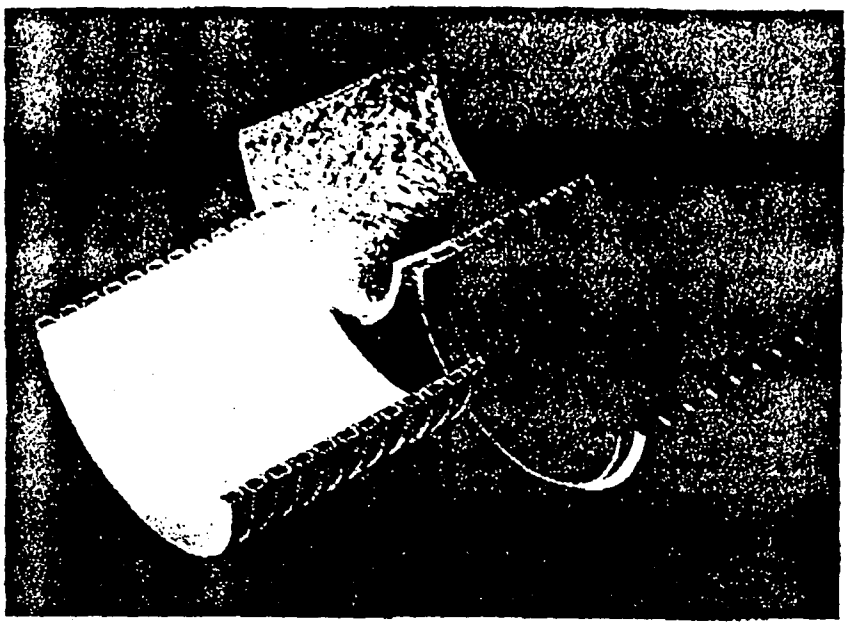
Better hydraulics

Both A-2000 and solid wall PVC pipes have a Manning coefficient of 0.009. However, visual inspection illustrates A-2000's superior flow characteristics. Its smooth, glossy interior, coupled with joint and fitting designs that minimize recesses at the bell, help ensure uninterrupted flow. The smooth interior also provides better self-cleaning action, so there is less silting and lower maintenance costs.

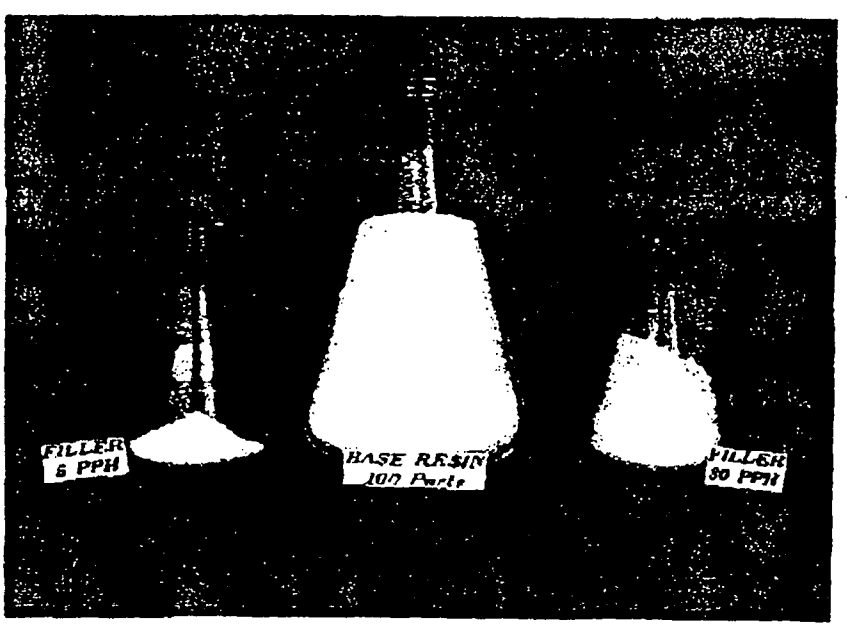
Better long-term performance

Unlike many PVC sewer pipes, A-2000 is manufactured from a low filler resin compound. Using cell class 12454 B compound (per ASTM D 1784) with less than 5 pph (parts per hundred parts of PVC resin) calcium carbonate filler, A-2000 provides excellent long-term performance. The more than 20-year performance history of PVC sewer pipe has been based on low filler compound 12454 B, much like that used in PVC water pressure pipes, which helps to ensure long-term strength properties and creep resistance.

Combining quality PVC resin compound for long-term strength with a higher pipe stiffness, a top-performing joint and a smooth-flowing interior, makes A-2000 an excellent choice for your sewer system, both initially and for the long haul.

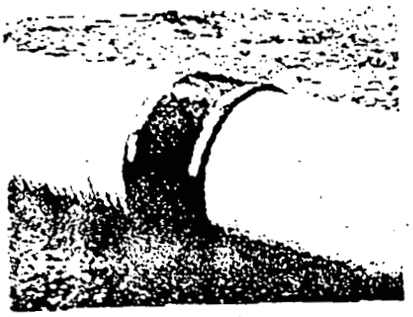


When compared with typical solid wall PVC pipe, top, and PVC ribbed pipe, right, you can see how A-2000's smooth, glossy interior provides superior flow and better self-cleaning action.



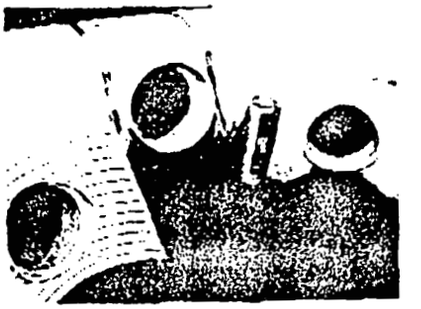
Unlike many other PVC sewer pipes which may contain 30 to 40 pph filler (typically crushed limestone), A-2000 is manufactured from a low filler (5 pph) compound. The low filler compound helps to ensure long-term strength properties and creep resistance.

ORIGINAL



Standard flexible rubber connectors are compatible to allow use of A-2000 or SDR 35 repair sections.

A-2000 tee fitting.



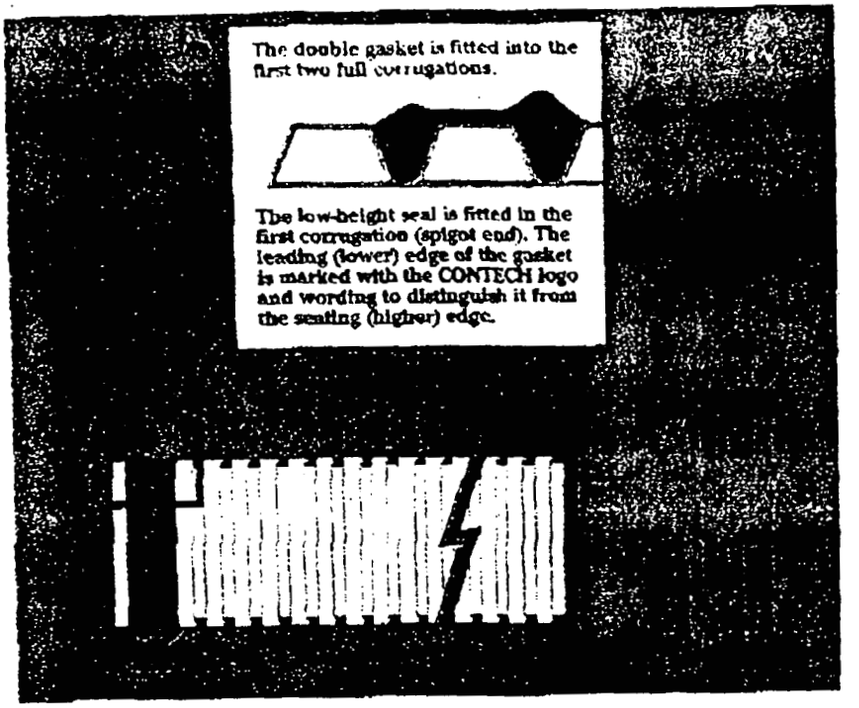
SDR 35 saddle on A-2000 pipe.

Compatible with your sewer system

A-2000 is manufactured to the exacting dimensional requirements of ASTM F 949-93a to ensure joint performance and system compatibility. Unlike some other profile wall sewer pipe specifications (i.e. ASTM F 794), ASTM F 949-93a provides inside and outside diameter control, sealing, and bell and spigot depth dimensions. This is your assurance that all pipes manufactured to ASTM F 949-93a are compatible—fittings fit, and jointing is ensured now and in the future.

While A-2000 sewer systems generally include A-2000 laterals, the system is compatible with ASTM D 3034 sewer pipe. Mainline fittings are available with either A-2000 branch hubs or D 3034 branch hubs. Either lateral system can be specified without requiring field-installed adapters.

A complete package of field repair items and saddle taps are provided. However, fast, permanent repairs can also be made using many materials typically used to repair ASTM D 3034 pipe. Flexible rubber adapters are compatible to allow insertion of A-2000 or D 3034 repair sections. Even saddle taps can be made using D 3034 saddles with approved off-the-shelf adhesives or gaskets.



Note: The gasket is designed for installation as shown. If the gasket is inadvertently installed backwards (with the seating edge fitted into the first corrugation), it will be more difficult to "home" the spigot inside the bell.

A-2000 is compatible with your system. Maintenance crews don't need to inventory special repair items, and, since A-2000 provides the same inside diameters as ASTM D 3034 (SDR 35) pipe, deflection testing can be accomplished using SDR 35 mandrels.

CONTECH A-2000 is fully compatible with other piping systems. Connections to DWV, clean-outs, etc., are made in the same type adapter as solid wall pipes. For special connections, adapters are available from CONTECH and several other standard sources.

Specifications

A-2000 is specified by calling for PVC sewer pipe to meet the requirements of ASTM F 949-93a. Specifying A-2000 assures you of CONTECH's commitment to quality, performance, and economy.

Applicable specifications
ASTM F 949-93a: for A-2000 pipe and fittings
ASTM D 1784: cell class 12454B; for quality PVC resin
ASTM D 2321-89: for installation of PVC sewer pipes

PVC A-2000 Gravity Sanitary Sewer Pipe

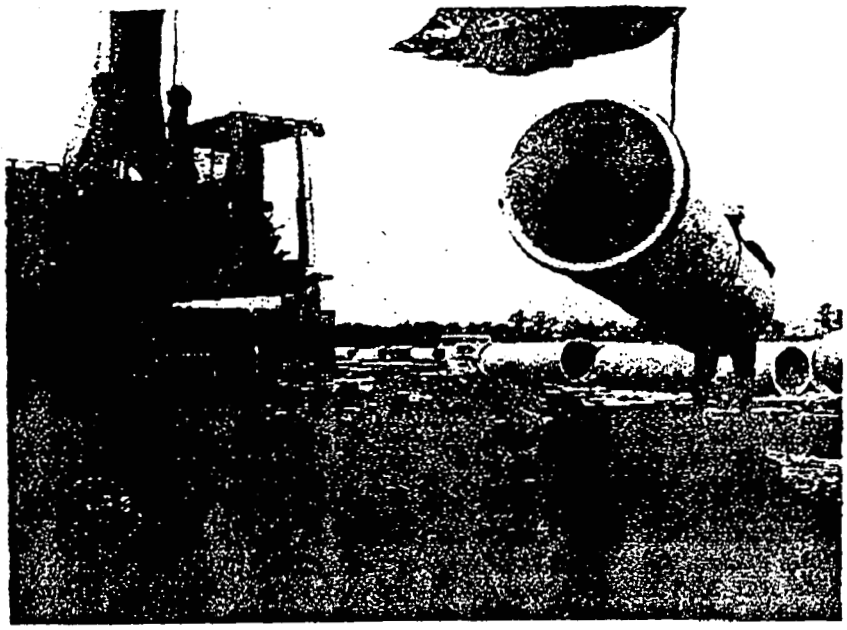
Scope: This specification covers the material, manufacture, installation, and testing of A-2000 PVC gravity sanitary sewer pipe.

Material: The thermoplastic material shall be a rigid PVC (polyvinyl chloride) plastic and shall meet or exceed the requirements of ASTM Specification D 1784, for a minimum cell classification of 12454B or 12454C. The fittings shall be made of PVC plastic having a cell classification of 12454B, 12454C, or 13343C as defined in ASTM Specification D 1784.

Manufacture: The A-2000 PVC sewer pipe shall be manufactured per ASTM F 949-93a with a minimum pipe stiffness (tested in accordance with ASTM D 2412) of 50 psi. There shall be no evidence of splitting, cracking, or breaking when pipe is tested in accordance with ASTM D 2412 at 60 percent flattening. Pipe dimensions shall meet the requirements given in ASTM F 949-93a when measured in accordance with ASTM D 2122.

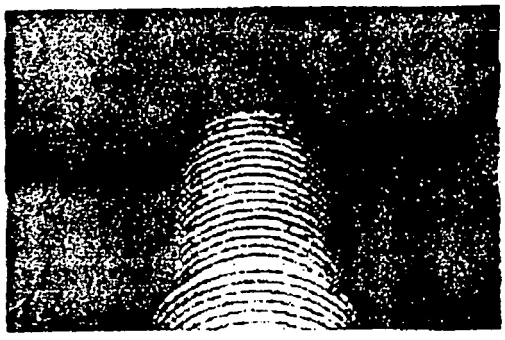
Joints: Gasketed pipe joints shall show no leakage when tested in accordance with ASTM D 3212. Elastomeric seals (gaskets) shall meet the requirements of ASTM Specification F 477.

Installation: Install per ASTM D 2321-89



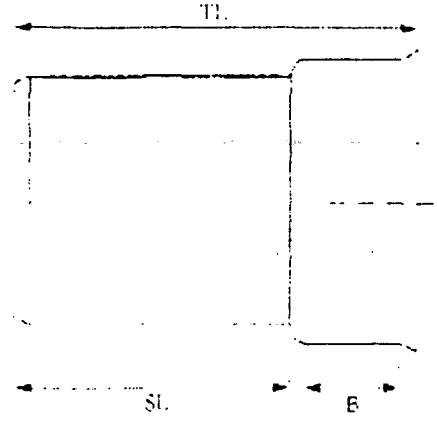
ORIGINAL

Manhole connections



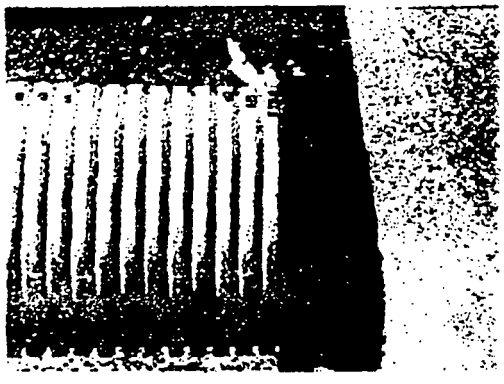
Where manholes are manufactured with A-LOKs, use an A-2000 Bell/SDR 35 (D 3034) Spigot adapter (A-LOK to be sized for SDR 35, D 3034, except 30" adapter is fabricated from SDR 32.5).

A-2000 Bell to SDR 35 Spigot Adapter



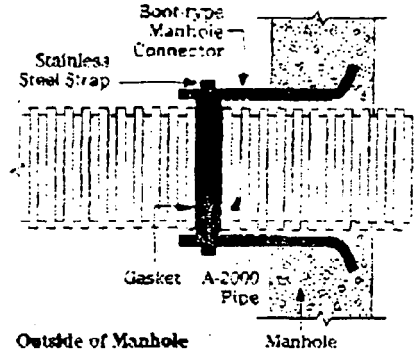
◀ **Dimensions are minimums.*

Nominal Diameter (Inches)	Length B* (Inches)	Length SL* (Inches)	Length TL* (Inches)	Spigot Average O.D. (Inches)
8	5.0	8.5	13.5	8.4
10	5.5	9.0	14.5	10.5
12	6.0	11.0	18.5	12.5
15	6.5	11.5	20.0	15.3
18	6.5	11.5	20.0	18.7
21	8.5	12.0	23.5	22.0
24	8.5	14.5	27.5	24.3
30	9.5	14.5	28.5	32.0



Standard A-2000 double gasket on the pipe spigot for rubber boot connection (see detail).

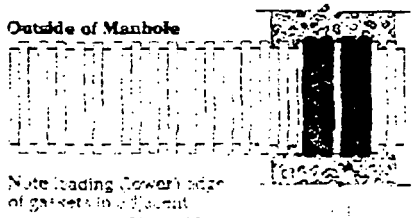
Boot Connection Detail



Nominal Diameter	Average Outside Diameter
4"	4.30"
6"	6.42"
8"	8.60"
10"	10.79"
12"	12.80"
15"	15.66"
18"	19.15"
21" *	22.59"
24" *	25.58"
30" *	32.15"

*For 21" diameter and larger pipe, the boot manufacturers recommend using two stainless steel clamp assemblies (with two screws per assembly) per boot. Clamps should be positioned evenly around the boot groove with the screws staggered so that the take-up pressure is equalized. Tighten screws of the outside clamp in an alternating pattern to the recommended torque, and then tighten screws on the inside clamp. After reaching recommended torque on final screw, check all screws again to ensure equal compression of both clamps.

A-2000 Manhole Connector (Waterstop type)



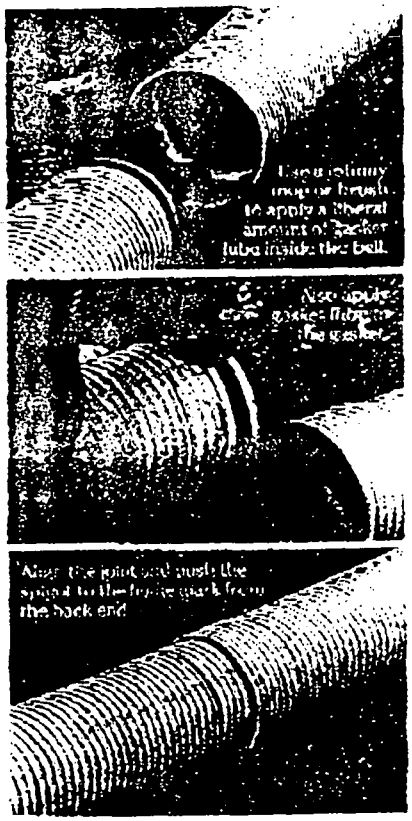
Note leading (lower) edge of gasket is placed between corrugations. 8" and 10" diameter require two gaskets.

Flexible manhole connectors are mandatory. For cast-in-place concrete bottoms, precast bottoms with "mouse hole" or similar pipe-to-manhole entry that does not incorporate a flexible connection, use two standard A-2000 double gaskets for 8"- and 10"-diameter pipe, positioned on the pipe in the center of the manhole with the leading (lower) edge of the gaskets in adjacent corrugations and concrete grout or seal the pipe-manhole connection as required. For pipe with diameters of 12 inches through 30 inches, use one standard A-2000 double gasket, positioned on the pipe in the center of the manhole, with the leading (lower) edge of the gasket placed to the inside of the manhole

ORIGINAL

000274

Installation guide



Installation of A-2000 PVC Sewer Pipe should meet the particular project plans and specifications as well as the requirements of ASTM D 2321, "Standard Recommended Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe."

Assembling gasketed joints

The gasket should be field attached on the spigot end of the pipe where the first two corrugation valleys provide for gasket seating. The joint cannot be assembled without proper lubrication. Follow these steps:

1. Thoroughly clean the bell and spigot end, making sure they are free of mud, grit, etc. If the gasket has been removed for any reason, make sure the gasket seat (first two corrugation valleys) is clean. Install the gasket by stretching it over the spigot end and nesting it into the seat. The leading (lower height) edge of the gasket is marked to distinguish it from the seating (higher) edge. The low height seal is fitted in the first corrugation, and the higher (seating) edge fills the second seat (valley).
2. Use a johnny mop or brush to apply a liberal amount of gasket lube to the gasket and to swab the inside of the bell.
3. Align the joint and push the spigot to the home mark from the back end. If a bar is used, make sure a wood block protects the pipe end from the bar.
4. On field-cut ends, remove the gasket from the cut-off end and reinstall according to Step 1.

A-2000 can be easily field-cut to any length, without having to chamfer the new spigot end.

Field-cutting pipe

A-2000 can be easily field-cut to length with a hand saw. The new spigot end does not require chamfering or bevelling.

Saddle connections

Similar to solid wall (SDR 35) PVC pipe, both adhesive sealed saddles and gasket-sealed saddles are readily available with A-2000. In fact, standard smooth skirted SDR 35 saddles are compatible with A-2000.

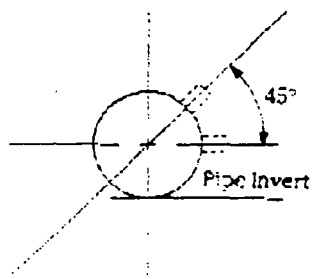
Repair couplings

Repair couplings are readily available in the event they're ever needed.

Laterals, deep laterals, risers, and drop manholes

When laterals, deep laterals, risers, or drop manholes are required, the installation must be designed to ensure that the pipe and fittings are not damaged by loads generated by soil settlement, dragdown, and/or poor installation practices.

Generally, as sewer depths increase and/or soil quality declines, additional attention must be given to these loads to ensure a satisfactory installation.



In order to minimize lateral pipe "punch-through" potential, it is recommended to install wye or tee fittings at an angle no greater than 45° from the horizontal centerline. Stacks (installing wyes or tees at a 90° angle from the pipe horizontal centerline) should not be allowed.

Other CONTECH A-2000 products

D 2000 PVC pipe for storm sewers and drainage

CONTECH D-2000 PVC double-wall pipe represents the latest in drainage pipe technology and engineering design. Coupled with time-proven materials and construction practices, D-2000 provides superior, cost-effective, long-term performance.

D-2000, available in 12"-30" diameters, is the ideal storm sewer/drainage pipe product. It combines the long-term durability and corrosion resistance of PVC, proven pipe stiffness, smoother interior surface for improved hydraulic performance, water-tight and soil-tight rubber gasketed joints, light weight and long lengths for easier handling and less costly installation.

CONTECH D-2000 storm sewer pipe, which meets all of the requirements of AASHTO M304-91, is designed for dependable performance. AASHTO Section 18, entitled "Soil-Thermoplastic Pipe Interaction Systems," provides structural design methodology for plastic pipe. Based on D-2000 section properties (Table 1) and published AASHTO minimum 50-year tensile strength values (Table 2), maximum allowable heights of cover for D-2000 PVC pipe are shown in Table 3.

Table 1 CONTECH D-2000 PVC Double Wall Pipe Section Properties

Size (Inches)	Inside Diameter (Inches)	Outside Diameter (Inches)	Area (In.²/Ft.)	$C^{(1)}$ (Inches)	I (In.⁴/In.)
12	11.70	12.80	1.591	0.350	0.00568
15	14.34	15.66	1.884	0.405	0.01040
18	17.55	19.15	2.503	0.493	0.01860
21	20.69	22.59	2.868	0.586	0.02880
24	23.47	25.58	3.360	0.654	0.04190
30	29.47	32.15	4.104	0.824	0.08360

Table 2 Mechanical Properties[2]
(Cell Class 12454 PVC Resin)

Minimum Tensile Strength	Minimum Modulus of Elasticity
Initial 7,000 psi	Initial 400,000 psi
50 years 3,700 psi	50 years 140,000 psi

Table 3 Heights of Cover

Diameter (Inches)	D-2000 Corrugated PVC Pipe[3] (Feet)
12	49
15	47
18	51
21	50
24	50
30	50

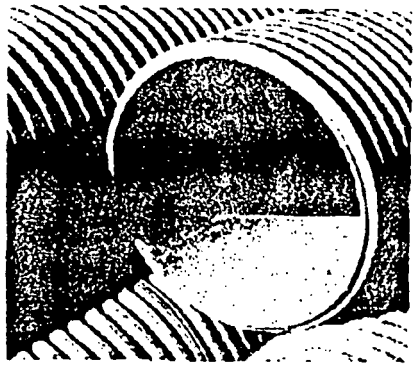
Notes
(1) Extreme fiber distance from neutral axis.
(2) Allowable long-term strain = 5%.
(3) Corrugated PVC pipe properties per Tables 1 and 2.
Minimum cover (HS 20 live load) = 12" (AASHTO M 294) with Class IA embedment.

A-2000 perforated pipe for subdrainage systems

CONTECH A-2000 has several important features that make it the designer's first choice for subsurface drainage systems:

- 50 psi pipe stiffness.
- Smooth interior for improved hydraulic capacity.
- Double wall design that provides essential beam strength for improved alignment and installation grade control. Positive gasketed jointing system.

Standard perforations for 4"-18" diameters are slots (see Table 4), while perforations for pipe sizes 21" through 30" A-2000 are circular 3/8" diameter (.375") holes. Fully perforated A-2000 is also available.



Slot perforations are used in 4-inch to 18-inch diameters

Table 4 Perforation Dimensions

Pipe Size (Inches)	Slot Dimension/ Hole Size (Inches) (Minimum)	Centers (Inches)	Perforation Open Area (In.²/LF)
4	1.052 L x 0.031 W	0.42	1.90
6	1.375 L x 0.031 W	0.52	1.98
8	1.750 L x 0.031 W	0.69	1.90
10	2.187 L x 0.031 W	0.83	1.98
12	1.687 L x 0.051 W	1.03	2.00
15	1.250 L x 0.051 W	1.38	2.00
18	2.250 L x 0.051 W	1.38	2.00
21	0.375 Diameter	1.60	3.30
24	0.375 Diameter	1.90	2.70
30	0.375 Diameter	2.32	2.20

A2 Liner Pipe for sliplining and rehabilitation

CONTECH CONSTRUCTION PRODUCTS INC., continuing its long tradition of advanced technology profiled-wall PVC plastic pipe, is meeting the growing demands for the repair and rehabilitation of our failing underground infrastructure. CONTECH A2 Liner Pipe possesses the same outstanding features that are quickly making A-2000 the industry standard plus a unique gasketed joint system. The joint system incorporates a coupling that does not reduce the interior diameter or increase the outside diameter of the A2 liner pipe. This joint system, combined with A-2000's added pipe stiffness, superior flow characteristics, and proven long-term performance, makes CONTECH A2 Liner Pipe the ideal solution for pipeline repair and rehabilitation problems.

7 Mar 97

RE: PO158 Haul Rd. & N. Entrance Rd.
Transmittal No.: 1698/1699 - 007
DCN No.: DCN-007
A-2000 Substitute Pipe (PVC Pipe)

Approved as Noted

General

1. The ODOT Construction and Material Specifications used in the design of the project was dated January 1, 1995. Item 603 does not allow PVC for Type B Conduits. However, the current edition, dated January 1, 1997, (issued after the CFC drawings were issued) does include PVC corrugated smooth interior pipe, ODOT Item 707.42 for Type B conduit.

   Recommend acceptance based on the current edition of the ODOT Construction and Material Specifications provided the pipe is installed according to ODOT ('97 ed.) Item 603 and the manufacturer's recommendations. This includes the minimum 12-inch cover from top of pipe to bottom of flexible pavement section (16-inches thick from top of bituminous concrete surface course to bottom of ODOT Item 304 aggregate. Subcontractor should submit letter of certification of compliance that material supplied meets ODOT standards (per 97 edition ODOT Item 707.42).

2. Subcontractor should address the use of the standard metal flared end sections with the A-2000 PVC pipe.

North Entrance Road

1. Pipes 1&2 appear to not have the necessary cover (noted above) per Contech Construction Products, Inc. Letter dated March 4, 1997. Since the PVC is smoother pipe, it is recommended that these twin 24" cmp be changed to twin 15" corrugated pvc with the invert elevations listed below:

CMP 1&3	581.33
CMP 2&4	581.65

   These elevations are based on the pipe being extended 2-ft on each end, making the pipe 54' long.

2. Similar to Pipes 1&2, Pipes 3&4 will not have enough cover. Recommend that the twin pipes be 18" corrugated pvc with the new inverts listed below:

CMP 5&7	582.63
CMP 6&8	582.78

   Cut the ditch from CMP 5/7 outfall to the CMP 1/3 outfall at a straight grade.

3. ODOT HW-4A are listed for the end treatment for these pipes. (See RCI-008, 1699:004R). Note that the half height will leave the plastic pipe exposed to damage. Recommend HW-1 replace the HW-4A.

PARSONS

ENGINEERING CALCULATIONS TITLE AND SUMMARY SHEET

Date 3/7/97

Sheet 1 of 10

Proj. Order No. 158 Calculation No. 15-07

Project Title HALL ROAD & NORTH ENTRANCE ROAD

Calculation Subject PVC PIPE (DCN007) Date Verified/Checked _____

STATUS: PRELIMINARY _____ FINAL X SUPERSEDED _____ VOID _____

STATEMENT OF PROBLEM

DCN 007 REQUEST CHANGE FROM CMP TO PVC, VENDOR REQUIRES 1' MIN COVER FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT. SOME PIPES DO NOT HAVE THIS COVER. CHECK ON REDUCING PIPE SIZE AND/OR INVERT ELEV.

SUMMARY OF CONCLUSIONS

NORTH ENTRANCE ROAD

- CHANGE PIPES 1 & 2 TO 15" PVC WITH NEW INV.
- CHANGE PIPES 3 & 4 TO 18" PVC WITH NEW INVERTS

Originator's Signature and Date

Kenneth Gerard 3-7-97

CHECKING METHOD

1. Review X
2. Alternate Calculation _____

Checker's Signature and Date

3-7-97

Technical Lead's Signature and Date

3-7-97

Rev. No.	Sheet No.	Description	Reviser's Signature/Date	Checker's Signature/Date	Approved by Signature/Date

PARSONS

ENGINEERING CALCULATIONS
BASIS SHEET

Revision No. Ø

Sheet 2 of 10

Proj. Order No. 158 Calculation No. 15-07

Project Title HAUL ROAD & NORTH ENTRANCE ROAD

Calculation Subject PVC PIPE (DCN 007) Date Verified/Checked 3-7-97

Prepared By: K. GERARD Checked/Verified By:

Date 3/7/97

SUMMARY OF DATA SOURCES - CODES - ASSUMPTIONS

DATA SOURCES

CFC DWGS

CALCULATION 15-05

VENDOR DATA

HAESTAD METHODS FLOW MASTER

CODES

N/A

ASSUMPTIONS

AS NOTED W/IN CALC

PARSONS

COMPUTER CALCULATION SUMMARY SHEET

OU: 2 PO: 158 Job Number: 7663-0158-1112-175

Computer Code: FLOWMASTER Version: 5.13

Code Verification Status: VERIFIED

Description of Program: COMPUTE PRESSURE FLOW IN PIPES

Source of Data: CFC DWGS, CALC 15-05

Purpose/Description of Calculation: SIZE CULVERTS 1/2 & 3/4 USING PVC

Run Performed By: K. Gerard

Date/Time of Run: 3/6 & 3/7/97

Computer Time of Run: N/A

Input Filename: P:\engdata\c&sdata\po158\nerpipe1.fmz

Output Filename: SAME

Files Saved to Diskname: SEE PATH ABOVE Disk Location:

Results: AS NOTED SHEET 1

Performed By: K Gerard Date: 3/7/97

Checked By: [signature] Date: 3-7-97

Approved By: K Gerard Date: 3-7-97
Technical Lead

000281

Att. 4 of 11
Dell 1698/99 CL.7

PARSONS ERA PROJECT CALCULATION SHEET

REV	BY	DATE	CK	DATE	TITLE	Project
1	KG	1-16-97	TJS	3-7-97	NORTH ENTRANCE ROAD DCN 007	PO No. 158
					AUTHOR K. GERARD SHEET 1 OF 10	

CHECK TO SEE IF TWIN 24" CMP CAN BE REPLACED WITH TWIN 18" PVC. (TO ALLOW FOR MORE COVER, HOLD INVERT) @ 200+94

RE: CALCULATION 15-05, DTD 7/22/96
CONTECH A-2000 LITERATURE

CALCULATION 15-05 GIVES CAPACITY OF TWIN-24" CMP @ 24.6 cfs.
CALCULATE CAPACITY USING $n_{PVC} = 0.009$ PER CONTECH LIT, AND DIA. = 1.5' (18"), S = 0.005' (PER CALC 15-05)

$$\text{CAPACITY } Q_{2\text{-}18} = 2\left[\left(\frac{1.49}{n}\right)(R)^{2/3}(S)^{1/2}(A)\right] \qquad R = \frac{A}{WP} = \frac{\pi r^2}{2\pi r}$$

$$Q_{2\text{-}18} = 2\left(\frac{1.49}{0.009}\right)\left(\frac{0.75}{2}\right)^{2/3}(0.005)^{1/2}\left(\pi(0.75)^2\right) \qquad R = r/2$$

$$Q_{2\text{-}18} = 21.5 \text{ cfs.}$$

THIS IS LESS THAN CALC 15-05 HAS FOR TWIN-24" CMP. (24.6 cfs)
TRY TWIN 21" PVC.

$$Q_{2\text{-}21} = 2\left(\frac{(1.49)}{0.009}\left(\frac{0.875}{2}\right)^{2/3}(0.005)^{1/2}\left(\pi(0.875)^2\right)\right.$$

$$Q_{2\text{-}21} = 32.5 \text{ cfs.}$$

OK, AS FAR AS MEETING THE FLOW/CAPACITY REQUIREMENTS.

TRY TWIN-18" PVC @ S = 0.008' (PER ELEV. & LONG 00242)

$$Q_{2\text{-}18} = 2\left(1.49/0.009\right)\left(\frac{0.75}{2}\right)^{2/3}(0.008')^{1/2}\left(\pi(0.75)^2\right)$$

$Q_{2\text{-}18} = 27.22$ cfs., > 24.6 cfs $\therefore$ OK

CK'D FOR ID = 17.55" = 25.4 CFS ok

000282

NA/ENG025

PARSONS ERA PROJECT

CALCULATION SHEET

REV	BY	DATE	CK	DATE
I	KG	3/7/97	ADB	3-7-97

TITLE HAUL ROAD & NORTH ENTRANCE ROAD

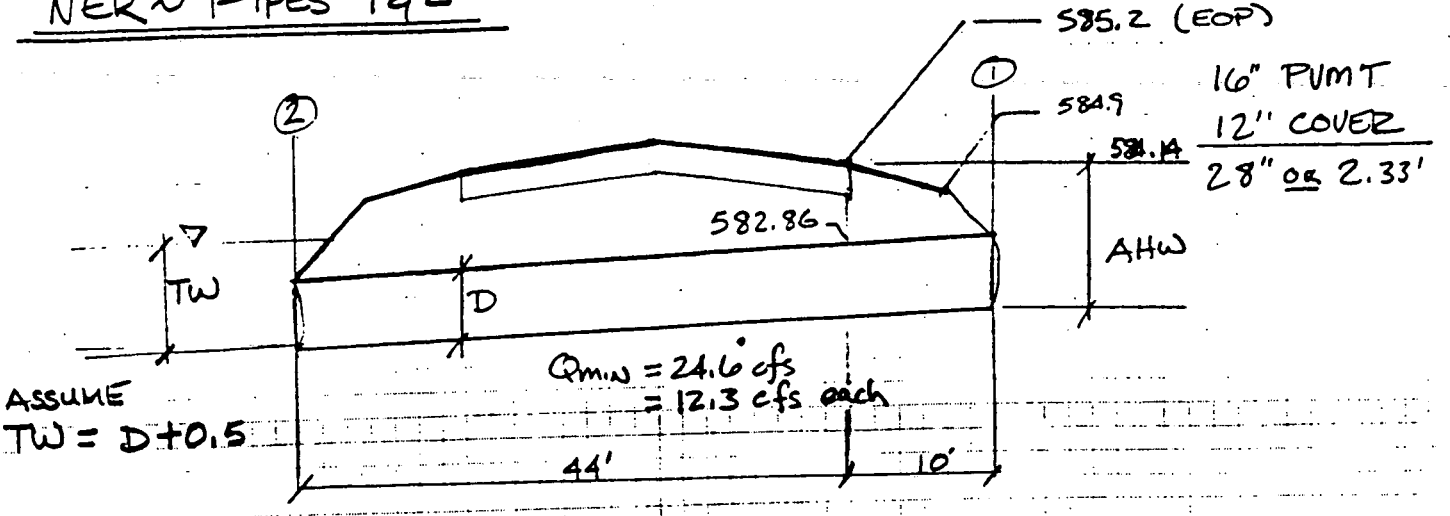
DCN 007

AUTHOR K. GERARD SHEET 5 OF 10

Project 15-07

PO No. 158

NER ~ PIPES 1 & 2



16" PUMT
12" COVER
28" OR 2.33'

ASSUME
TW = D + 0.5

TRY S = 0.004 ft/ft
D = 15" (ID = 14.34")

Q_{cap} = 11.75 cfs NG!!

TOP$_1$ = 582.90
INV$_1$ = 581.65
INV$_2$ = 581.43

AHW = 584.14 − 581.65 = 2.49

SET Q @ 12.3 cfs, HOLD INV$_1$ = 581.65 AND SOLVE FOR INV$_2$ (ELEV)

FROM FM, INV$_2$ = 581.35'
S = 0.0056 ft/ft

TRY S = 0.006 ft/ft & HOLD INV$_1$ @ 581.65
∴ INV$_2$ = 581.33 } USE

FROM FM, Q_{cap} = 12.43 cfs > 12.3 cfs OK !!

000283

AH 6/98
DCN 16 9/8/99 CC 7

NER PIPES 1 & 2 (@12.3 cfs each)
Worksheet for Pressure Pipe

Project Description	
Project File	p:\engdata\c&sdata\po158\nerpipe1.fm2
Worksheet	NER - PIPE 1
Flow Element	Pressure Pipe
Method	Hazen-Williams Formula
Solve For	Elevation at 2

Input Data	
Pressure at 1	2.49 feet H20
Pressure at 2	1.75 feet H20
Elevation at 1	581.65 ft
Length	54.00 ft
C Coefficient	150.0
Diameter	14.34 in
Discharge	12.30 ft³/s

Results		
Elevation at 2	581.35	ft
Headloss	1.04	ft
Energy Grade at 1	586.01	ft
Energy Grade at 2	584.96	ft
Hydraulic Grade at 1	584.14	ft
Hydraulic Grade at 2	583.10	ft
Flow Area	1.12	ft²
Wetted Perimeter	3.75	ft
Velocity	10.97	ft/s
Velocity Head	1.87	ft
Friction Slope	0.019335	ft/ft

NER PIPES 1 & 2 (@ s=0.60%)
Worksheet for Pressure Pipe

Project Description	
Project File	p:\engdata\c&sdata\po158\nerpipe1.fm2
Worksheet	NER - PIPE 1
Flow Element	Pressure Pipe
Method	Hazen-Williams Formula
Solve For	Discharge

Input Data	
Pressure at 1	2.49 feet H20
Pressure at 2	1.75 feet H20
Elevation at 1	581.65 ft
Elevation at 2	581.33 ft
Length	54.00 ft
C Coefficient	150.0
Diameter	14.34 in

Results		
Discharge	12.43	ft^3/s
Headloss	1.06	ft
Energy Grade at 1	585.85	ft
Energy Grade at 2	584.78	ft
Hydraulic Grade at 1	584.14	ft
Hydraulic Grade at 2	583.08	ft
Flow Area	1.12	ft^2
Wetted Perimeter	3.75	ft
Velocity	11.08	ft/s
Velocity Head	1.91	ft
Friction Slope	0.019703	ft/ft

AH 8 of 11

PARSONS ERA PROJECT CALCULATION SHEET

REV	BY	DATE	CK	DATE	TITLE	Project
C	KGH	3/7/97	TJB	3-9-97	NORTH ENTRANCE ROAD DCN 007	PO No. 158
					AUTHOR K GERARD SHEET 8 OF 10	

TWIN-30"CMP (PIPES 3 & 4)

$S_{ACTUAL} = 0.1'/50' = 0.002'/'$ $\quad Q_{CMP} = 34.6$ cfs. (TOTAL)

CHECK CAPACITY - TRY TWIN 24"PVC

$$Q_{2-24} = 2\left(\frac{1.49}{0.009}\right)\left(\frac{1}{2}\right)^{2/3}(0.002)^{1/2}(\pi \cdot 1^2)$$

$$Q_{2-24} = 29.3 \text{ cfs.}$$

TRY S @ 0.003'/'

$$Q_{2-24} = 2\left(\frac{1.49}{0.009}\right)\left(\frac{1}{2}\right)^{2/3}(0.003)^{1/2}(\pi \cdot 1^2)$$

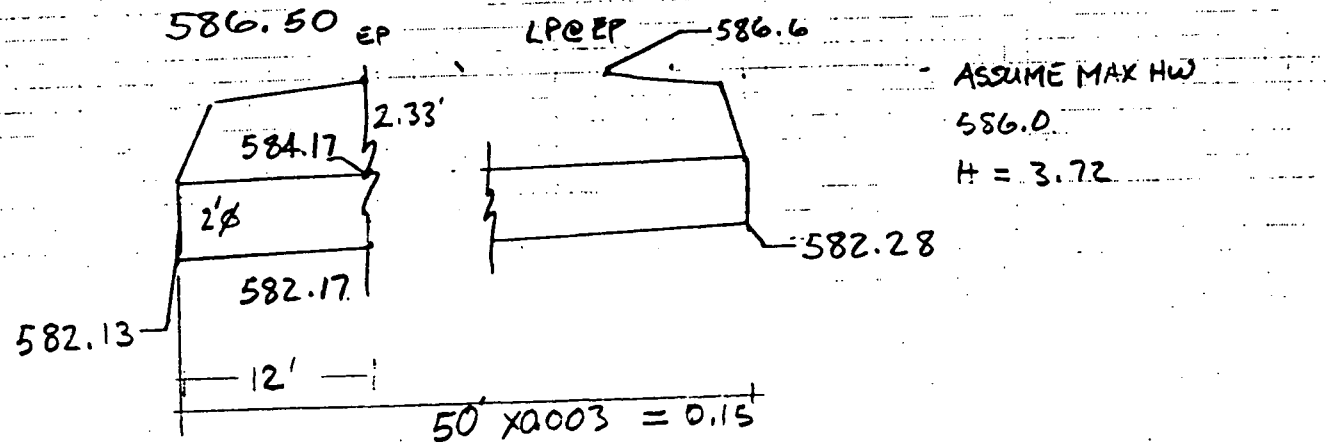
$Q_{2-24} = 35.9$ cfs. > 34.6 cfs $\therefore$ OK.

CHECK PRESSURE.

NEED 1' MIN. COVER, TOP OF PIPE TO BOTTOM OF FLEX. PAVEMENT. PAVEMENT SECTION = 16" (G00219). 12"+16" = 28" = 2.33'

ASSUME EP IS 586.50 (PER G00231 IT WOULD BE 586.58)

AND IT IS 12' FROM DOWNSTREAM INVERT. 12' @ 0.003 = 0.036'



ASSUME TW 0.5'

OVER TOP OF PIPE

584.63

000286

NA/ENG025

04/96

NER PIPES 3 & 4 18" PVC
Worksheet for Pressure Pipe

Project Description	
Project File	p:\engdata\c&sdata\po158\nerpipe1.fm2
Worksheet	NER PIPES 3 & 4
Flow Element	Pressure Pipe
Method	Hazen-Williams Formula
Solve For	Discharge

Input Data	
Pressure at 1	3.22 feet H20
Pressure at 2	2.00 feet H20
Elevation at 1	582.78 ft
Elevation at 2	582.63 ft
Length	50.00 ft
C Coefficient	150.0
Diameter	18.00 in

(ASSUME TW = DIA. + 0.5')

Results		
Discharge	27.00	cfs
Headloss	1.37	ft
Energy Grade at 1	591.21	ft
Energy Grade at 2	589.84	ft
Hydraulic Grade at 1	586.00	ft
Hydraulic Grade at 2	584.63	ft
Flow Area	1.77	ft²
Wetted Perimeter	4.71	ft
Velocity	15.28	ft/s
Velocity Head	3.63	ft
Friction Slope	0.027399	ft/ft

2 PIPES = 54 cfs

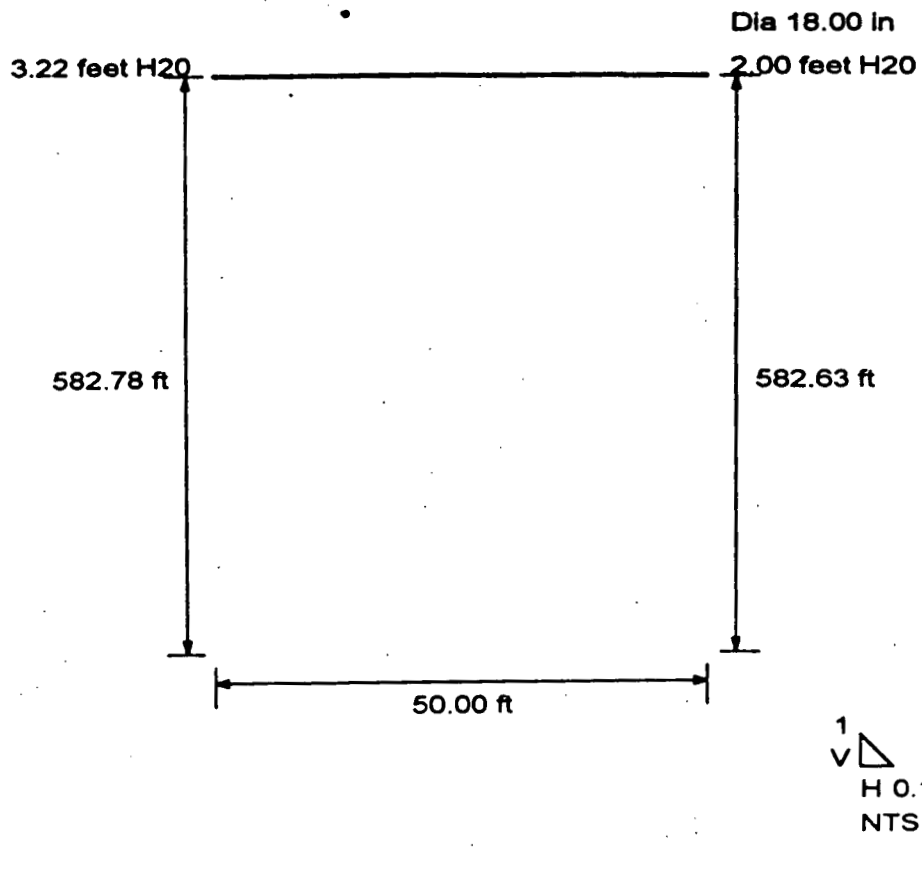
DESIGN FLOW = 34.6 cfs. ∴ OK

000287

Cross Section Pipes 3 & 4
Cross Section for Pressure Pipe

Project Description	
Project File	p:\engdata\c&sdata\po158\nerpipe1.fm2
Worksheet	NER PIPES 3 & 4
Flow Element	Pressure Pipe
Method	Hazen-Williams Formula
Solve For	Discharge

Section Data	
Pressure at 1	3.22 feet H20
Pressure at 2	2.00 feet H20
Elevation at 1	582.78 ft
Elevation at 2	582.63 ft
Length	50.00 ft
C Coefficient	150.0
Diameter	18.00 in
Discharge	27.00 cfs



000288

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE-

949

(1)WP / WO NO.: 1698/1699	(2)S/C NO.: FSC 587	(5)Pg 1 OF 3	(6)DATE 4/7/97
(3)S/C TITLE: HAUL ROAD CONSTRUCTION			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E☒ MO CO OTHER☐	(4A)RCI/DCN TITLE: PLACEMENT OF GEOGRID		(11)DCN NO.: 1698/99 008

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
DRAWINGS 92X-5900-G-00189, 00188		0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☒ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- POTENTIAL CONTAMINATION ISSUES NEAR STA. 155+50 TO STA. 162+27 PRECLUDE ADDITIONAL EXCAVATION IN THIS AREA.
- PROPOSE TO NOT CONSTRUCT CATCH BASIN $\frac{CB}{11}$; SLOPE DITCH TOWARDS NEAREST DRAIN.
- PROPOSE TO USE GEOGRID MATERIAL TO "BRIDGE" EXISTING MATERIAL TO ALLOW PLACEMENT OF SUITABLE SUBGRADE MATERIAL.
- PROPOSE TO USE GEOGRID IN OTHER AREAS OF HAUL RD. CONSTRUCTION WITHIN THE CONTROLLED AREA WHEN NECESSARY.

(10)REQUESTOR: J. C. JENKINS	COMPANY: FDF	DATE: 4/7/97	(12)FCE / PE: James C. Jenkins	DATE: 4/7/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons Comments attached Pages 1 of 2 & 2 of 2

2) RECORD AS-built condition's

(PARSONS) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schwoerke	DATE: 4/9/97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CCR4	
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) J. C. Jenkins			DATE: 4/10/97
PERFORMANCE GRADE: (17) 4			
(18)CONSTRUCTION CONCURRENCE:	DATE: 4-10-97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)			

FS-F-4259 (10/01/96)

ORIGINAL

9 Apr 97

Haul Road Construction
PO158
TRANSMITTAL No.: 1698/99-008
Doc. No.: DCN-008 ISSUE: 1

Subject: Placement of Geogrid

Comments are as follows:

It is understood that the vegetation between Sta 155 + 50 to Sta 162.27.62 (end) has been stripped and the area excavated to subgrade (i.e., ready to place 12" soil subgrade fill). Further, the pavement design section and profile elevations given in the Construction Drawings are still applicable in this area. The following recommendations are based on the above conditions.

Caution should be used when using the following recommendations as field conditions in other areas may be different.

A) Materials:

Geogrid Reinforcement Fabric - Tensar Corporation, Type BX-1200

Geotextile Fabric - 6 oz/yd^2 non-woven geotextile. Geotextile fabric shall be Trevira Type 1120 or equal as a minimum. Please note that this fabric is different than the woven fabric approved under DCN-003

Prior approval from FDF is required for any substitutions.

B) Definitions:

Firm Subgrade - Undrained shear strength of more than 1000 psf, as estimated from the Torvane Shear Test.

Soft Subgrade - Undrained shear strength of 1000 psf or less, as estimated from the Torvane Shear Test.

A hand-held Torvane Shear Test should be used to estimate the undrained shear strength. The Torvane shear test should be performed by a qualified soils technician.

C) Installation:

1. If the subgrade ground surface is firm, install geogrid reinforcement fabric directly on ground surface and anchor according to Tensar Corporation's *Base Reinforcement Installation Guide, latest ed.* Minimum geogrid overlap shall be 2 ft.

2. If subgrade ground surface is soft, install a geotextile fabric directly on ground surface. Overlap geotextile fabric seams a minimum 3 ft. Install geogrid reinforcement fabric on top of geotextile fabric and anchor according to Tensar Corporation's *Base Reinforcement Installation Guide, latest ed.* Minimum geogrid overlap shall be 3 ft.

949

3. It is recommended that a product representative from the geogrid supplier be consulted for additional guidance in installation of the geogrid fabric material.

4. Begin installation of first lift of soil subgrade material using a 8" minimum compacted lift. Care should be taken to ensure that equipment operates on top of the lift surface and does not operate in direct contact with the geogrid reinforcement fabric.

5. After spreading, compact material in the first lift by making a minimum of 3 complete passes using a small tracked dozer (i.e. Caterpillar D3 or equivalent size).

6. Place, spread, and compact remainder of soil subgrade fill using standard equipment in accordance with Construction Drawings.

7. Place, spread, and compact remaining lifts of design pavement section as shown on Drawing 92X-5900-G-00184.

4/10/97 gag

~~D) It is recommended that CB11 be installed as designed to provide positive drainage in this area.~~

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 1698/1699	(2)S/C NO.: 587	(5)Pg 1 OF 3	(6)DATE 4-8-97
S/C TITLE:		(11)RCI NO.:	
(4) RESPONSIBLE DISCIPLINE: E☒ M☐ C☒ OTHER☐	(4A)RCI/DCN TITLE: RELOCATE GUYS - POLES # 10 & # 17	(11)DCN NO.: 1698/99-007	

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
94X-5900-E-00948	E0003	4	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- GUY LINES FROM POLES #10 & #17 ARE LOCATED WITHIN THE NEW O.S.D.F HAUL ROAD.
- GUY LINES SHOULD MOVE FROM THEIR PRESENT LOCATION AT 3-O'CLOCK TO 5-O'CLOCK. SEE ATTACHED!

(10)REQUESTOR:	COMPANY:	DATE:	(12)FCE / PE	DATE:
[signature]	FDF	4-8-97	[signature]	4-8-97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☒ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) INSTALL SIDEWALK GUY (8' STRUT) EAST OF POLE # P10 AS SHOWN ON MARK-UP.
2) INSTALL SIDEWALK GUY (8' STRUT) NORTHEAST OF POLE # P17 AS SHOWN ON MARK-UP.
3) INSTALL TWO 5/8" GUYS SOUTHEAST OF POLE # P17. GUYS TO BE INSTALLED SIMILAR TO DET. 8 ON DWG. E00966. ONE GUY AT 32' FROM POLE TO CARRY LOAD FROM STATIC AND PARTIAL LOAD OF 13.2kV. ONE GUY AT 24' TO CARRY PARTIAL LOAD OF 13.2 kV LINES.

* A QUICK SURVEY OF THIS DISTRIBUTION SYSTEM INDICATED THAT NONE OF THE GUY ARRANGEMENTS MATCH DWG. DETAILS. NO DOCUMENTATION COULD BE FOUND AUTHORIZING THESE FIELD CHANGES.

** SEE ATTACHED MARK-UP OF DRAWING 94X-5900-E-00948, REV. 4

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
M.J. Boyman	5-19-97	2CCR4

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 5/27/97

PERFORMANCE GRADE: (17) 4 James C. Jenkins

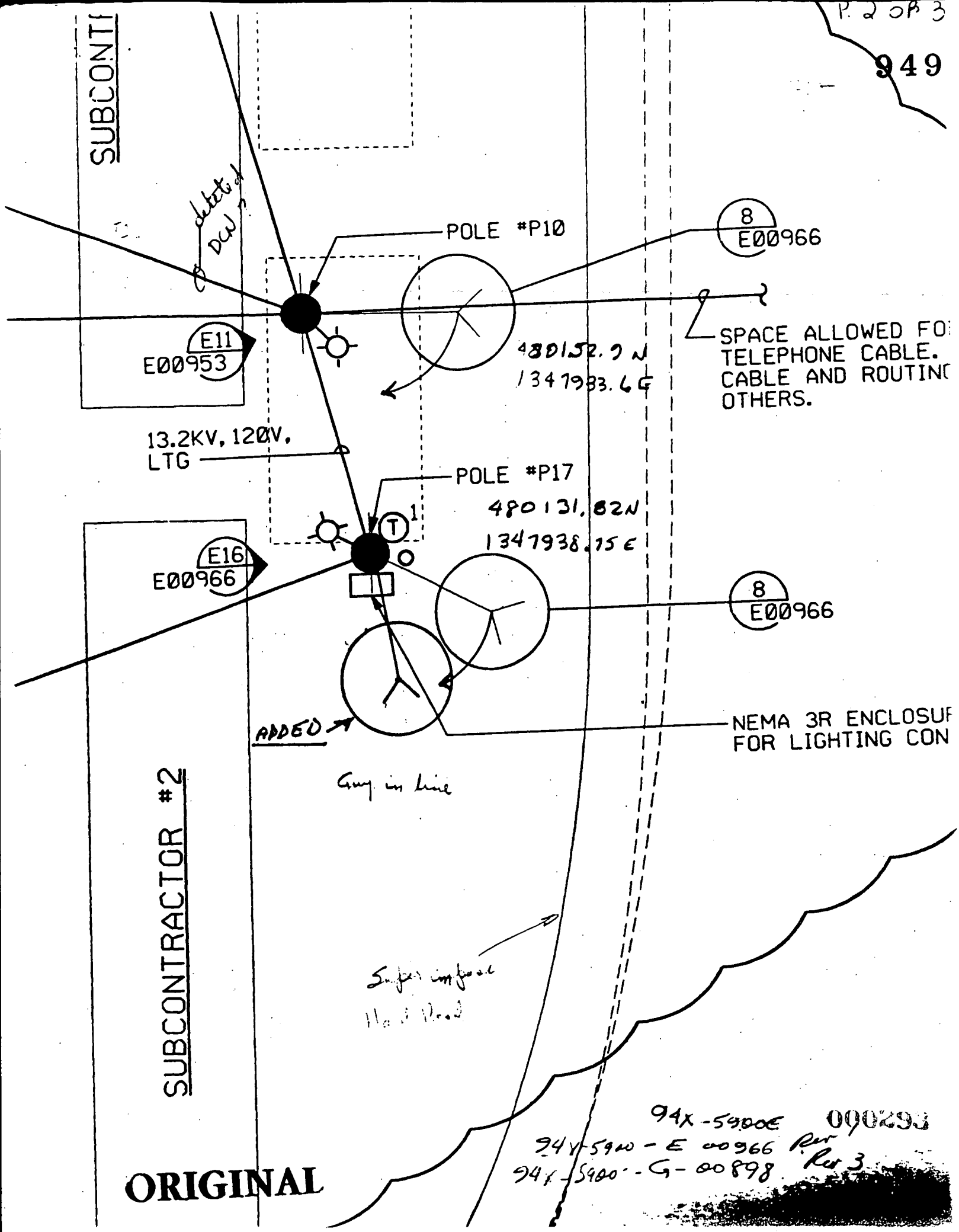
(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)			

F-4259 (10/01/96)

ORIGINAL

000292

949



94X-5900E 000293
94Y-5900-E 00966 Rev
94X-5900-G-00898 Rev 3

ORIGINAL

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.:	(2)S/C NO.:	(5)Pg OF	(6)DATE
1698/1699	FSC-587	1 2	4-7-97

(3)S/C TITLE: HAUL ROAD & RELOCATED NORTH ENTRANCE RD

(11)RCI NO.:

(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☑ OTHER☐

(4A)RCI/DCN TITLE: SOIL WORKING AREA NORTH OF D&D

(11)DCN NO.: 1698/99 010

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
CIVIL PLAN & PROFILE	92X-5900-G-00189	0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☑ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

THIS DCN IS WRITTEN FOR THE PURPOSE OF PROVIDING INFORMATION TO BARRETT PAVING MATERIALS INC. ON HOW TO "SHAPE" THE SOIL THAT WAS UNDERCUT NORTH OF D&D BUILDING NO. 69 FROM STATION ±155+50 TO STATION 162+27.62

SEE ATTACHED SKETCH # 20120-SK-001

(10)REQUESTOR: Jim SALYERS COMPANY: B.F.D.F. DATE: 4-7-97

(12)FCE / PE: Jim Salyers DATE: 4-8-97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES

(14)FOR DCN: ☒ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

SEE PARSONS Additional Comment attached as PAGE 1 of 1

Carlton Schroeder (PARSONS) 6/4/97

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: James C. Jenkins DATE: 4/8/97

(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CCR4

(16)F0F PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 4/8/97

PERFORMANCE GRADE: (17) 4 James C. Jenkins

(18)CONSTRUCTION CONCURRENCE: DATE: 4-8-97

PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)

(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

1997 MAY 27 PM 3:33

F-4259 (10/01/96)

received 5-23-97

ORIGINAL

DCN: 010

000296

949

PLAN

Typical Cross Section

N.T.S.
JRE 1/2/97

#20120-SK-001

Haul Road - D+D Soil Working Area

ORIGINAL

0002927

HAUL ROAD

DOCUMENT REVIEW COMMENT SHEET

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 6/4/97
DOCUMENT NO. AND TITLE: DCH-010 Soil Working Area, N of D&D		DATE COMMENTS DUE:
REQUEST NO.: 1 / TRANSMITTAL No.: 1698/99-010		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC /	COMMENT RESOLUTION
1	K. Gerard		Work area may drain towards Production area fence & the trench drain just beyond. Place silt fence between Work area and chain link fence, minimum of 5' from toe of soils		
2.	K. Gerard		Work Area will be over an Existing storm drain. Use extream caution NOT to damage line as it is the line which helps to drain the perimeter trench system (and soils assumed to be CONTAMINATED!)		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE - 949

w/ATTACHMENT

(1) WP / WO NO:	(2) S/C NO.:	(5) Pg OF	(6) DATE
1698/99	FSC-687	1 1	4-9-97

(3) S/C TITLE: HAUL ROAD & REROUTED NORTH ENTRANCE ROAD

(11) RCI NO.:

(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☑ OTHER☐

(4A) RCI/DCN TITLE: DELETE GALVANIZED WIRE FENCE

(11) DCN NO.: 1698/99-011

(7) DOCUMENTS AFFECTED	(7) DOCUMENT NOS.	(7) REV.	(8) OTHER
CIVIL GENERAL DETAILS SHEET 2 OF 2	92X-5900-G-00205	Ø	SILT FENCE DETAIL
CIVIL GENERAL DETAILS SHEET 1 OF 2	92X-5900-G-00240	Ø	SILT FENCE DETAIL

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☑ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

BARRETT PAVING MATERIALS INC. DID NOT INSTALL THE GALVANIZED WIRE FENCE WITH THE SILT FENCE AS SHOWN ON THE "SILT FENCE DETAIL" ON DRAWING 92X-5900-G-00205 REV. Ø FOR THE HAUL ROAD. IF THIS DCN IS ACCEPTED TO DELISTE THE WIRE FENCE ON THE HAUL ROAD, IT WILL ALSO BE DELISTED ON THE NORTH ENTRANCE ROAD AND A REQUISITION FOR A DEDUCTIVE CHANGE ORDER WILL BE GENERATED.

REFERENCE ATTACHED BARRETT PAVING MATERIALS INC. NON CONFORMANCE REPORT.

(10) REQUESTOR:	COMPANY:	DATE:	(12) FCE / PE	DATE:
[signature]	BPM	4-9-97	James C. Jenkins	4/9/97

(13) RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14) FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons approved as noted comments, attached as Page 1 of 1

(PARSONS) RCI - DCN ACCEPTANCE

(15) DESIGN ORGANIZATION APPROVAL:	DATE:	(20) CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Carlton Schroedy	4/14/97	RCRA

(16) FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE

PERFORMANCE GRADE: (17) 4 James C. Jenkins 4/21/97

(18) CONSTRUCTION CONCURRENCE:	DATE:	(21) WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
[signature] for Lee Wallis	4-21-97		

PURCHASE REQUISITION REQUIRED: ☑ YES ☐ NO (19)

F-4258 (10/01/96)

ORIGINAL

DCN 011

received 4-10-97

EXECUTED

000299

FLUOR DANIEL FERNALD
REROUTED NORTH ENTRANCE
HAUL ROAD CONSTRUCTION
1698 / 99 - 587

BARRETT PAVING MATERIALS INC.

949

NON-CONFORMANCE REPORT

NON-CONFORMANCE REORT NUMBER: 001 DATE VERIFIED: 3/10/97

CONTRACT REQUIREMENT: SILT FENCE, AS PER SILT FENCE DETAIL ON 92X-5900-G-00205 REV 0

NON-CONFORMANCE: HAVE INSTALLED APPROXIMATELY 540' OF FDF APPROVED (BPM-015 ATTACHED) ODOT STANDARD 712.09 TYPE C SILT FENCE, WHICH DOES NOT INCLUDE A GALV. WIRE FENCE. BARRETT PAVING MATERIALS INC INTENDS TO USE THE ABOVED MENTION ODOT STANDARD 712.09 TYPE C SILT FENCE FOR THE COMPLETION OF THE SILT FENCE ON PROJECTS

PROPOSED CORRECTIVE ACTION: ACCEPT- AS-IS (✓) REWORK ( ) REPAIR ( ) 1698/99
REJECT ( ) OTHER ( )

PROPOSED COMPLETION DATE: OCT 16, 1997

Andrew Brueggemann - Quality Assurance

PROJECT MANAGER

EVALUATION OF PROPOSED DISPOSITION AND CORRECTIVE ACTION

FDF CONSTRUCTION CONTRACTS MANAGER: _____

ACCEPT ( ) REJECT ( ) DATE: _____

FLUOR DANIEL FERNALD ENGINEERING: _____

ACCEPT ( ) REJECT ( ) DATE:

VERIFICATION OF ACTION

VERIFICATION OF ACTION: _____

QUALITY ASSURANCE ENGINEER: _____ DATE VERIFIED: _____

FDF CONSTRUCTION CONTRACTS MANAGER: _____ DATE VERIFIED: _____

A-NON.XLS

000300

207-30000 FILTER FABRIC FENCE

FLUOR DANIEL FERNALD SUBCONTRACT NO. FSC 587
REROUTED NORTH ENTRANCE ROAD

DOCUMENT No. BPM-015 R/C

(√) A- CFC doc: Conforms w/reqmts
( ) B- Minor/no comments: /INF/REC
( ) C- Revise and resubmit
( ) D- For inf/rec: conforms w/reqmts
SIGN/DATE: [signature] 11-25-96

OCTOBER 30, 1996

AMOCO FABRICS AND FIBERS COMPANY
NASHVILLE MILLS
P.O. BOX 477
NASHVILLE, GEORGIA 31639

May 8, 1995

Johnston Morehouse Dickey Co.
P. O. Box 173
Bethel Park, PA 15102

Dear Sir:

We wish to certify that the Amoco Style 2130 Silt Fence meets the requirements for ODot Class C and the following minimum average roll values:

Property	Test Method	Minimum Roll Average Value
Grab Tensile, lbs.	ASTM-D-4632	120X120
Grab Elongation, %	ASTM-D-4632	15X20
Mullen Burst, psi	ASTM-D-3786	300
Puncture, lbs.	ASTM-D-4833	60
Trapezoidal Tear, lbs	ASTM-D-4533	65X65
U.V. Resistance, % (Strength Retained)	ASTM-D-4355	80
AOS, US Sieve #	ASTM-D-4751-87	30
Permittivity, (1/sec) gal/min/sq. ft.	ASTM-D-4491	10

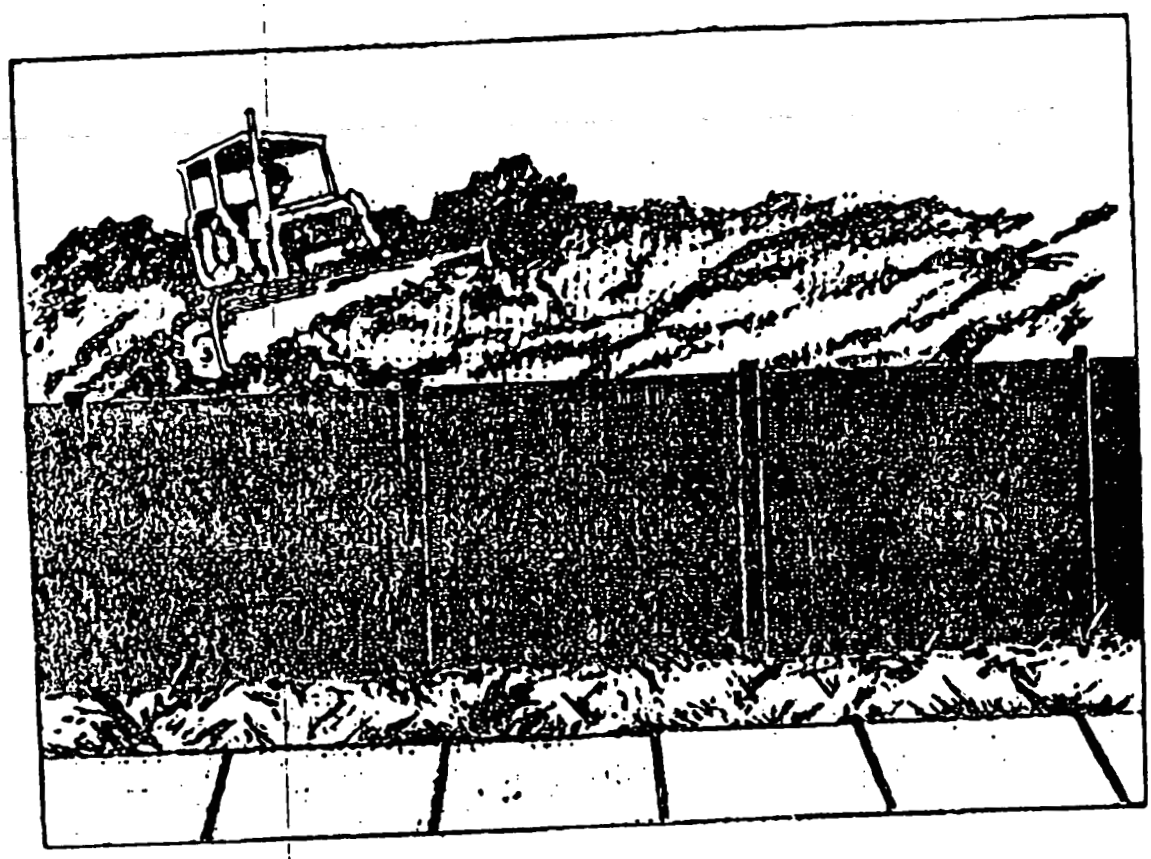
Amoco Fabrics and Fibers Company manufactures this product in the USA. The values above are a result of testing conducted in on-site laboratories at the time of production. All test methods used are ASTM or industry standards.

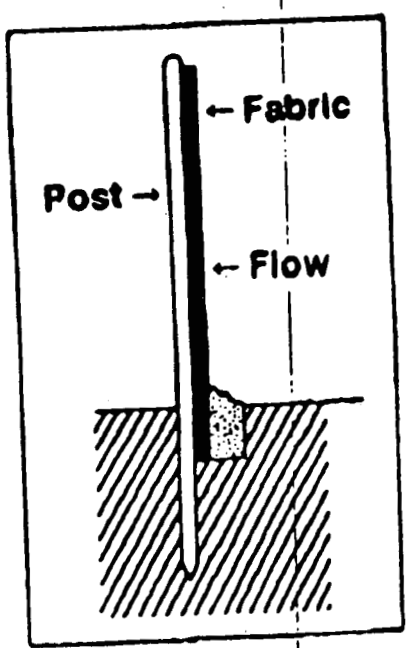
Tim Smith
Quality Assurance Manager

JMD

SINCE 1902

PREASSEMBLED SILT FENCE





INSTALLATION

- Dig a 6" wide by 6" deep trench where silt fence is to be installed.
- Drive posts into the ground on the downside trench edge until the bottom of the 6" unattached flap touches the bottom of the trench.
  Posts are to be on the downside of the fabric opposite the flow.
- Backfill the trench and tamp.
- With correct installation, silt and sediment will not flow under the silt fence.

DESCRIPTION

- Preassembled with hardwood stakes attached for fast installation.
- Packaged in bundles for easy transport and storage.
- Polypropylene fabric is specially designed to allow water to filter through while retaining silt and other sediment on construction sites.
- Protects streams, lakes, and other waterways from silt build-up.
- Keeps adjoining roadways free of mud and debris.
- Available in 18" x 100' and 36" x 100' sizes. Also custom sizes.
- DOT approved in most states.

SPECIFICATIONS

PROPERTY	TEST METHOD	RESULTS*
Fabric	—	woven
Polymer Composition	—	polypropylene
Grab Tensile Strength	ASTM D-4632	warp 120 lbs./fill 120 lbs.
Grab Elongation	ASTM D-4632	warp 15%/fill 20%
Trap Tear Strength	ASTM D-4533	warp 80 lbs./fill 80 lbs.
Puncture Strength	ASTM D-4833	60 lbs.
Mullen Burst Strength	ASTM D-3786	340 psi.
UV Resistance	ASTM D-4335	80%
A.O.S.	ASTM D-4751	30 US Sieve
Permittivity	ASTM D-4491	10 gpm/ft²

*Results shown are minimum physical properties.

For additional information on other JMD construction products please contact JMD or your area distributor.

Johnston-Morehouse-Dickey Company
P.O. Box 173
Bethel Park, PA 15102

Phone: (412) 833-7100
Fax: (412) 833-2338

AREA DISTRIBUTOR:

949

DOCUMENT REVIEW COMMENT SHEET

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE:
DOCUMENT NO. AND TITLE:		DATE COMMENTS DUE:
REQUEST NO.:		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC /	COMMENT RESOLUTION
1	M Barringer		Design change must prevent erosion for sediment control.	✓	

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

000305

DCN-011 Issue 1 1698/99 - 011 14 Apr 97
Haul Road & North Entrance Road
Delete Galvanized Wire Fence (on Silt Fence)

RE: Drawings 92X-5900-G-00205 & G-00240

Recommend Status B, Approved as noted

Comments are as follows:

1. The Amoco Style 2130 appears to conform to ODOT Item 712.09 Type C with the exception of grab elongation and should be suitable for use as silt fence.

2. The detail for silt fence on the referenced drawings show wire mesh. This mesh would provide additional support. However, it is not a requirement for ODOT and is not used in normal linear applications per ODNR *Rainwater and Land Development*. The wire mesh is shown by ODNR when used at catch basins. It is recommended that for linear applications (along slopes), that the wire mesh can be deleted. It should remain when used at catch basins.

3. If the wire mesh is deleted, additional maintenance should be expected to maintain sediment control.

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.: 1698/1699	(2)S/C NO.: FSC 587	(5)Pg 1 OF	(6)DATE 4/17/97
(3)S/C TITLE: HAUL ROAD CONSTRUCTION			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: ☒ MO ☐ CO ☐ OTHER ☐	(4A)RCI/DCN TITLE: EXCAVATION OF UNSUITABLE MATERL. STA. 118+75 To STA. 121+00		(11)DCN NO.: 1698/1699 -012

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00186		0	
92X-5900-G-00192		0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- UNSUITABLE SUBGRADE MATERIAL FOR ROAD CONSTRUCTION NECESSITATES REMOVAL FOR ROAD STABILITY
- PROPOSE TO UNDERCUT MATERIAL WITHIN LIMITS AS SHOWN ON SKETCH 20120-SK-002
- EXTEND PROPOSED CULVERT 1 PIPE LENGTH AT EACH END, MATCHING EXIST. INVERTS OF DRAINAGE.
- EXCAVATED MATERIAL TO BE STAGED FOR REUSE AROUND CULVERT EXTENSIONS AS DIRECTED BY FDF
- REQUISITION # 274036 (REF.) 4-21-97

(10)REQUESTOR: J. C JENKINS	COMPANY: FDF	DATE: 4/17/97	(12)FCE / PE James C. Jenkins	DATE: 4/17/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☒ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons Comment Sheet (Page 1 of 1)

(PARSONS) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder	DATE: 4/18/97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CCR4	

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 4/24/97

PERFORMANCE GRADE: (17) 4 James C. Jenkins

(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☑ YES ☐ NO (19) 4-21-97			

ES-F-4259 (10/01/96)

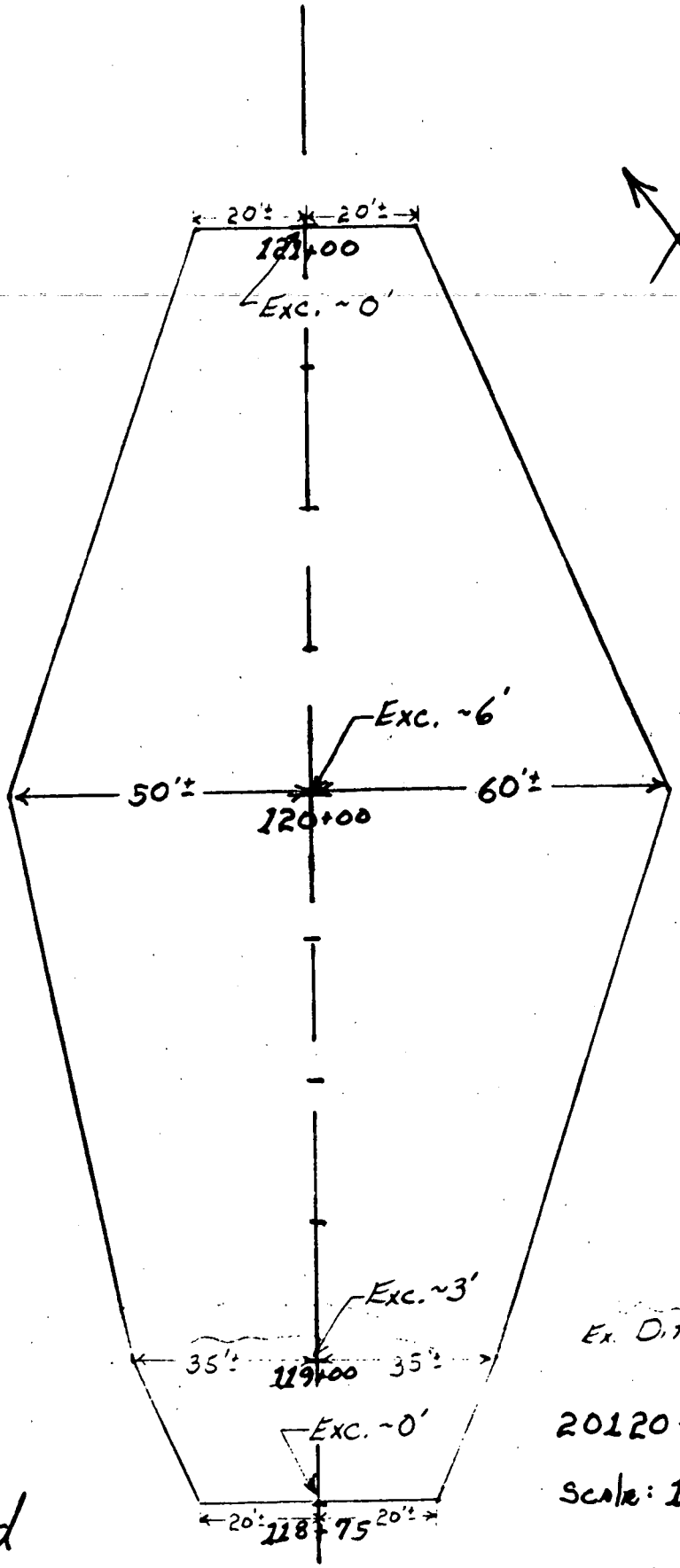
ENTERED

ORIGINAL

DCN 012

received 4-18-97

000307



20120-SK-002

Scale: 1" = 30'

Haul Road

Additional Excavation @ Staver Ditch

JRE
4/17/97

DOCUMENT REVIEW COMMENT SHEET

1698/99-012

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 4/19/97
DOCUMENT NO. AND TITLE: DCN 012 EXCAVATION OF UNSUITABLE MATERIAL		DATE COMMENTS DUE:
REQUEST NO.: HAUL RD STA 118+75 – STA 12+00		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC 1	COMMENT RESOLUTION
1	K. Gerard		REFER TO GEOTECHNICAL FOR LIMITS OF UNSUITABE EXCAVATION.		
2.	K. Gerard		JUSTIFICATION FOR ADDITIONAL PIPE IS NOT CLEAR. EXCAVATED MATERIAL MAY BE PLACED ON OTHER FILL SLOPES/AREAS, IF ADDITIONAL PIPE IS ADDED, NO EXCEPTION TAKEN TO METHOD PROPOSED, ASSUMING NO BENDS/CHANGES IN DIRECTION TO PIPE. [signature] 4-18-97		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

0003309

949

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1698/1699	(2)S/C NO.: FSC 587	(5)Pg 1 OF 2	(6)DATE 4/23/97
(3)S/C TITLE: HAUL ROAD CONSTRUCTION			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E☒ M☐ C☐ OTHER☐	(4A)RCI/DCN TITLE: ROAD GRADE MODIFICATION		(11)DCN NO.: 1698/1699 - 013

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00187, 00188, 00193, 00194, 00195		0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- UNSUITABLE MATR'L FOR ROAD CONSTRUCTION ON SOUTHERLY PORTION OF HAUL ROAD REQUIRED USING SUITABLE MATERIAL ORIGINALLY PLANNED FOR NORTHERLY PORTION OF HAUL RD. (REF DCN 1698/1699-012)
- PROPOSE TO LOWER FINISHED GRADE ELEVATION OF ROAD FROM STA. 130+50 TO STA 150+00 AS PER ATTACHED TABLE I.
- DITCHES TO REMAIN SAME ELEVATION AND LOCATION. i.e. CHANGE FRONT SLOPE AS NEEDED.

(10)REQUESTOR: J.C. JENKINS	COMPANY: FDF	DATE: 4/23/97	(12)FCE / PE: James C. Jenkins	DATE: 4/23/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☒ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons attachment Pages 1 & 2 of 2 providing recommended pavement grades from Station 130+00 to 151+00

(PARSONS) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder	DATE: 5/9/97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CCR4

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 5/13/97

PERFORMANCE GRADE: (17) 4 James C. Jenkins

(18)CONSTRUCTION CONCURRENCE:	DATE: 5-13-97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)			

FS-F-4259 (10/01/96)

DCN 013

REC: 4-24-97 RD

ORIGINAL

000310

EXCLUDE

PARSONS
ATTACHMENT
DCN-013
1698/1699-013

ORIGINAL

FERNALD HAUL ROAD - REVISED PROFILE AND SUPERELEVATION DATA **DCN-013**

HORIZONTAL CURVES	STATION	CONTROLLING CONDITION	LEFT E.O.P. ELEVATION	PAVEMENT SLOPE (%)	CENTERLINE ELEVATION	RIGHT E.O.P. ELEVATION	PAVEMENT SLOPE (%)
	130+00		576.96	-1.56%	577.15	576.96	-1.56%
	130+50		576.88	-1.56%	577.07	576.88	-1.56%
	131+00		577.34	-1.56%	577.52	577.34	-1.56%
	131+50		578.06	-1.56%	578.25	578.06	-1.56%
	132+00		578.78	-1.56%	578.97	578.78	-1.56%
	132+50		579.51	-1.56%	579.70	579.51	-1.56%
	133+00		580.23	-1.56%	580.42	580.23	-1.56%
	133+50		580.96	-1.56%	581.14	580.96	-1.56%
	134+00		581.68	-1.56%	581.87	581.68	-1.56%
	134+50		582.40	-1.56%	582.59	582.40	-1.56%
	135+00		583.13	-1.56%	583.31	583.13	-1.56%
	135+50		583.85	-1.56%	584.04	583.85	-1.56%
	136+00		584.57	-1.56%	584.76	584.57	-1.56%
HLRD-5 LT	136+07.83	BEGIN RUNOUT	584.69	-1.56%	584.88	584.69	-1.56%
	136+50		585.30	-1.56%	585.49	585.40	-0.72%
	137+00		586.02	-1.56%	586.21	586.24	0.28%
	137+50		586.75	-1.56%	586.93	587.09	1.28%
	137+63.83	BEGIN SE TRANS	586.95	-1.56%	587.13	587.29	1.28%
	137+95.83	MAX SE	587.33	-2.20%	587.60	587.86	2.20%
	138+00		587.42	-1.97%	587.66	587.89	1.97%
	138+36.17	TRANS. POINT	586.18	0.00%	586.18	586.18	0.00%
	138+50		586.43	0.43%	586.38	586.33	-0.43%
	139+00		589.34	1.97%	589.10	588.87	-1.97%
	139+50		590.20	3.51%	589.78	590.20	3.51%
HLRD-6 RT	139+53.00	BEGIN FULL SE	590.25	3.60%	589.81	589.38	-3.60%
	140+00		590.78	3.60%	590.34	589.91	-3.60%
	140+50		591.24	3.60%	590.81	590.37	-3.60%
	141+00		591.60	3.60%	591.17	590.73	-3.60%
	141+05.53	END FULL SE	591.63	3.60%	591.20	590.77	-3.60%
	141+50		591.76	2.81%	591.42	591.08	-2.81%
	142+00		591.80	1.92%	591.57	591.34	-1.92%
	142+50		591.74	1.03%	591.61	591.49	-1.03%

FERNALD HAUL ROAD - REVISED PROFILE AND SUPERELEVATION DATA **DCN-013**

HORIZONTAL CURVES	STATION	CONTROLLING CONDITION	LEFT E.O.P. ELEVATION	PAVEMENT SLOPE (%)	CENTERLINE ELEVATION	RIGHT E.O.P. ELEVATION	PAVEMENT SLOPE (%)
	143+00		591.57	0.14%	591.56	591.54	-0.14%
	143+07.61	TRANS. POINT	591.54	0.00%	591.54	591.54	0.00%
	143+50		591.35	-0.76%	591.44	591.54	0.76%
	144+00		591.14	-1.65%	591.33	591.53	1.65%
	144+50		590.92	-2.54%	591.22	591.53	2.54%
	144+87.22	BEGIN FULL SE	590.76	-3.20%	591.14	591.52	3.20%
	144+98.43	END FULL SE	590.73	-3.20%	591.11	591.50	3.20%
	145+00		590.73	-3.15%	591.11	591.49	3.15%
	145+50		590.80	-1.70%	591.00	591.20	1.70%
	145+54.81	END SE TRANS.	590.80	-1.56%	590.99	591.18	1.56%
	146+00		590.70	-1.56%	590.89	590.92	0.25%
	146+50		590.59	-1.56%	590.78	590.63	-1.21%
	146+62.05	END RUNOUT	590.56	-1.56%	590.75	590.56	-1.56%
	147+00		590.48	-1.56%	590.67	590.48	-1.56%
	147+50		590.37	-1.56%	590.56	590.37	-1.56%
	148+00		590.26	-1.56%	590.44	590.26	-1.56%
	148+50		590.15	-1.56%	590.33	590.15	-1.56%
	149+00		590.04	-1.56%	590.22	590.04	-1.56%
HLRD-8 RT	149+13.38	BEGIN RUNOUT	590.01	-1.56%	590.20	590.01	-1.56%
	149+50		590.04	-0.69%	590.15	589.96	-1.56%
	150+00		590.16	0.02%	590.16	589.97	-1.56%
	150+50		590.36	0.92%	590.25	590.06	-1.56%
	150+84.98	BEGIN SE TRANS	590.55	1.56%	590.36	590.17	-1.56%
	151+00		590.64	1.83%	590.42	590.20	-1.83%

700003-07000
HLRD8E.XLS 6/8/97

HAUL ROAD GRADE CHANGES

Station	Orig. Prop. Elev.	Revised Prop. Elev.
130+50	576.80 (PI)	576.80 (PI)
131+00	577.62	577.52
132+00	579.26	578.97
133+00	580.90	580.42
134+00	582.53	581.87
135+00	584.17	583.32
136+00	585.81	584.76
137+00	587.45	586.21
138+00	589.09	587.66
139+00	590.72	589.11
140+00	592.06 ± (℄)	590.26 ± (℄)
141+00	594.00 (PI)	592.00 (PI)
	593.00 ± (℄)	591.00 ± (℄)
142+00	593.25 ± (℄)	591.59 ± (℄)
143+00	593.11	591.56
144+00	592.67	591.33
145+00	592.22	591.11
146+00	591.78	590.89
147+00	591.34	590.67
148+00	590.89	590.45
149+00	590.48 ± (℄)	590.22 ± (℄)
150+00	590.00 (PI)	590.00 (PI)

ORIGINAL

TABLE I

DCN 1698/1699-013 SHT. 2 OF 2

ORE 4/23/97

DOCUMENT REVIEW COMMENT SHEET

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 5/9/97
DOCUMENT NO. AND TITLE: DCN-093 Road Grade Modification - Haul Road		DATE COMMENTS DUE:
REQUEST NO.: 1698 / 1699-013		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC 1	COMMENT RESOLUTION
1	K. Gerard		Recommend the edge of pavement and centerline elevations per		
			table attached from Sta 130+00 to Sta 151+00 in lieu of values		
			for centerline submitted w/DCN request.		

ORIGINAL

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE. 949

WP / WO NO.: 1698 / 1699 | S/C NO.: FSC 587 | Pg 1 OF 3 | DATE 5/5/97

S/C TITLE: HAUL ROAD CONSTRUCTION

RESPONSIBLE DISCIPLINE: E☒ M☐ C☐ OTHER ☐

RCI/DCN TITLE: SILT FENCE MODIFICATIONS

RCI NO.:

DCN NO.: 1698/99-014

DOCUMENTS AFFECTED	DOCUMENT NOS.	REV.	OTHER
CIVIL TEMP. EROSION CONTROL	92X-5900-G-00200	Ø	
"	92X-5900-G-00201	Ø	

☐RCI - INQUIRY ☐PRE-SCREEN FOR USOO BY PROJECT ENGINEER ☒DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

HIGHLIGHTED ARE PROPOSED DESIGN CHANGES, WHICH BARRETT PAVING MATERIALS INC. FEELS WOULD PROVIDE THE NECESSARY EROSION CONTROL

REQUESTOR: Andrew Brueggemann COMPANY: BPM | FCE / PE: James C. Jenkins 5/5/97

RESPONSE: FOR RCI, IS A DCN REQ'D? ☐NO ☐YES

FOR DCN: ☐APPROVED ☒APPROVED AS NOTED ☐DISAPPROVED

1) See Parsons Comments on Page 1 of 1.

FRANK JOHNSTON (FDF) RCI - DCN ACCEPTANCE

DESIGN ORGANIZATION APPROVAL: Carlton C. Shively 5/27/97

CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CCR4

FERMCO PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY)

PERFORMANCE GRADE: 4 James C. Jenkins 5/29/97

CONSTRUCTION CONCURRENCE: 5-29-97

PURCHASE REQUISITION REQUIRED? ☐YES ☐NO

WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

FS-P-4258 (03/15/96)

ENTERED

ORIGINAL

received FCO 5-7-97

DCN 014

PO 158 HAUL RD

DOCUMENT REVIEW COMMENT SHEET

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 5/27/97
DOCUMENT NO. AND TITLE: DCN 014 SILT FENCE MODIFICATIONS		DATE COMMENTS DUE:
REQUEST NO.: 1	TRANSMITTAL No: 1698/99 - 014	

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC 1	COMMENT RESOLUTION
1	K. GERARD		RECOMMEND MODIFICATIONS SHOWN AS MARKED BY RED PEN ON SKETCH 20120-SK-003 & 004.		
2	K. GERARD		ADDITIONAL MEASURES AND/OR MODIFICATIONS MAY BE REQUIRED BASED ON FIELD OBSERVATIONS.		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

000045

949

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE

949

(1)WP / WO NO.:	(2)S/C NO.:	(5)Pg OF	(6)DATE
1698/99	FSC 587	1 2	5-12-97

(3)S/C TITLE: HALL ROAD & REROUTED NORTH ENTRANCE ROAD

(11)RCI NO.:

(4) RESPONSIBLE DISCIPLINE:	(4A)RCI/DCN TITLE:	(11)DCN NO.:
EO MO CO OTHER O	Excavation of unsuitable Soil from Station 122+30 to 126	1698/99-015

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
CIVIL PLAN & PROFILE SHT: 2/5	92X-5900-G-00186	Ø	
CIVIL CROSS SECTIONS SHT-2/6	92X-5900-G-00192	Ø	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

THIS DCN IS FOR BARRETT PAVING MATERIALS INC. TO EXCAVATE STRUCTURALLY UNSUITABLE SOIL TO AN ELEVATION OF 570' WITH SIDE SLOPES OF 1.5 TO 1.0 BEGINNING @ APPROX. STATION 122+80. THE FLOOR OF THE EXCAVATION EXTENDING 12' TO THE LEFT AND THE SHOULDER OF THE SLOPE 46' TO THE RIGHT. EXCAVATION TO CONTINUE TO ABOUT STATION 126+00. BARRETT TO INSTALL GEO-GRID MATERIALS PER DCN 1698/99-008

REFERENCE ATTACHED SKETCHES 20120-SK-005 & 20120-SK-006.

(10)REQUESTOR:	COMPANY:	DATE:	(12)FCE / PE	DATE
JIM SALYERS	FDF			5-12-97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☒ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons attached comments
Pages 1 of 2 and 2 of 2

Carlton Schroeder (PARSONS) (6/6/97)

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
James C. Jenkins	5/12/97	2CCR4

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 5/12/97

PERFORMANCE GRADE: (17) 4 James C. Jenkins

(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)			

4259 (10/01/96)

received
5-23-97

DCN

ORIGINAL

000318

CYCLE

05 June, 1997

Haul Road Construction
PO158
TRANSMITTAL No.: 1698/99-015
Doc. No.: DCN-015 ISSUE: 1

Subject: Excavation of Unsuitable Soil, Sta 122 + 30 to Sta 126 + 00

Comments are as follows:

A. Not able to observe soil prior to excavation.

B. Informal observation 5/22/97 noted water standing in parts of ditch. Elevation of excavation at that time not known.

C. The width of the proposed excavation as shown is excessive for Haul Road construction. However, it is practical considering adjacent work (LCS by VBS).

D. Depth of unsuitable excavation may need to differ from elevation 570.

E. Recommend status "B" Approved as Noted.

949

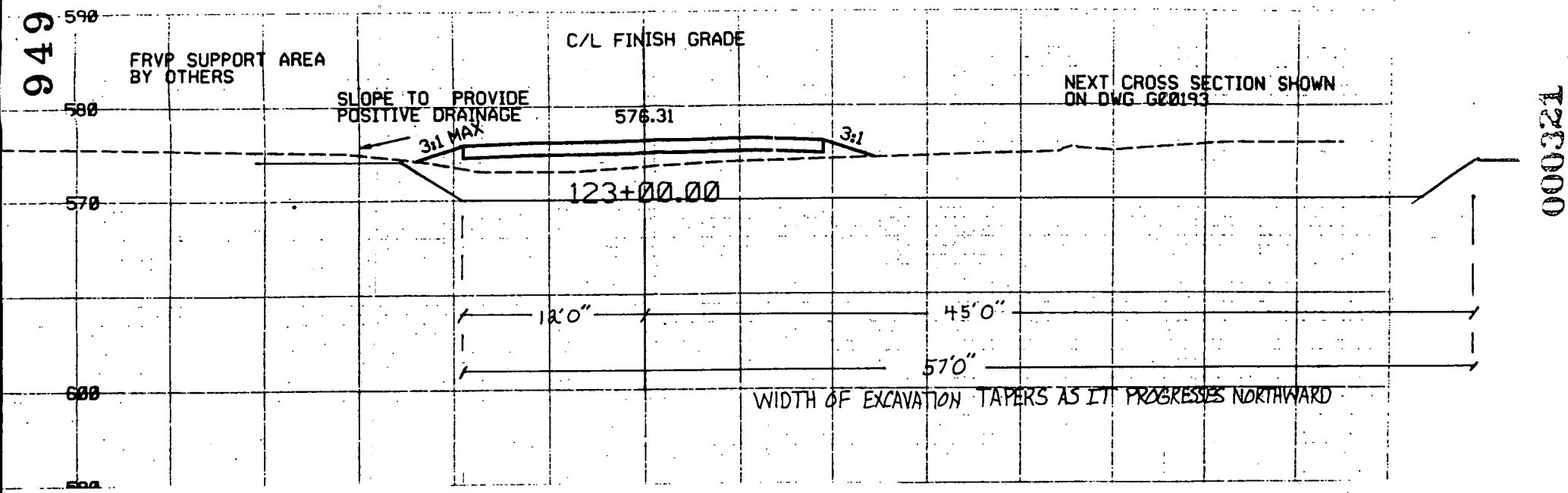
DOCUMENT REVIEW COMMENT SHEET

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 6-6-97
DOCUMENT NO. AND TITLE: DCN-015 (FDF 1698/99-015)		DATE COMMENTS DUE:
REQUEST NO.:		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC /	COMMENT RESOLUTION
1	S. Versluis		MAINTAIN ELEVATION OF ROADWAY AT 576 FT.		
2	S. Versluis		BACKFILL EXCAVATED VOLUME & COMPACT TO SPECIFICATION		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

000320

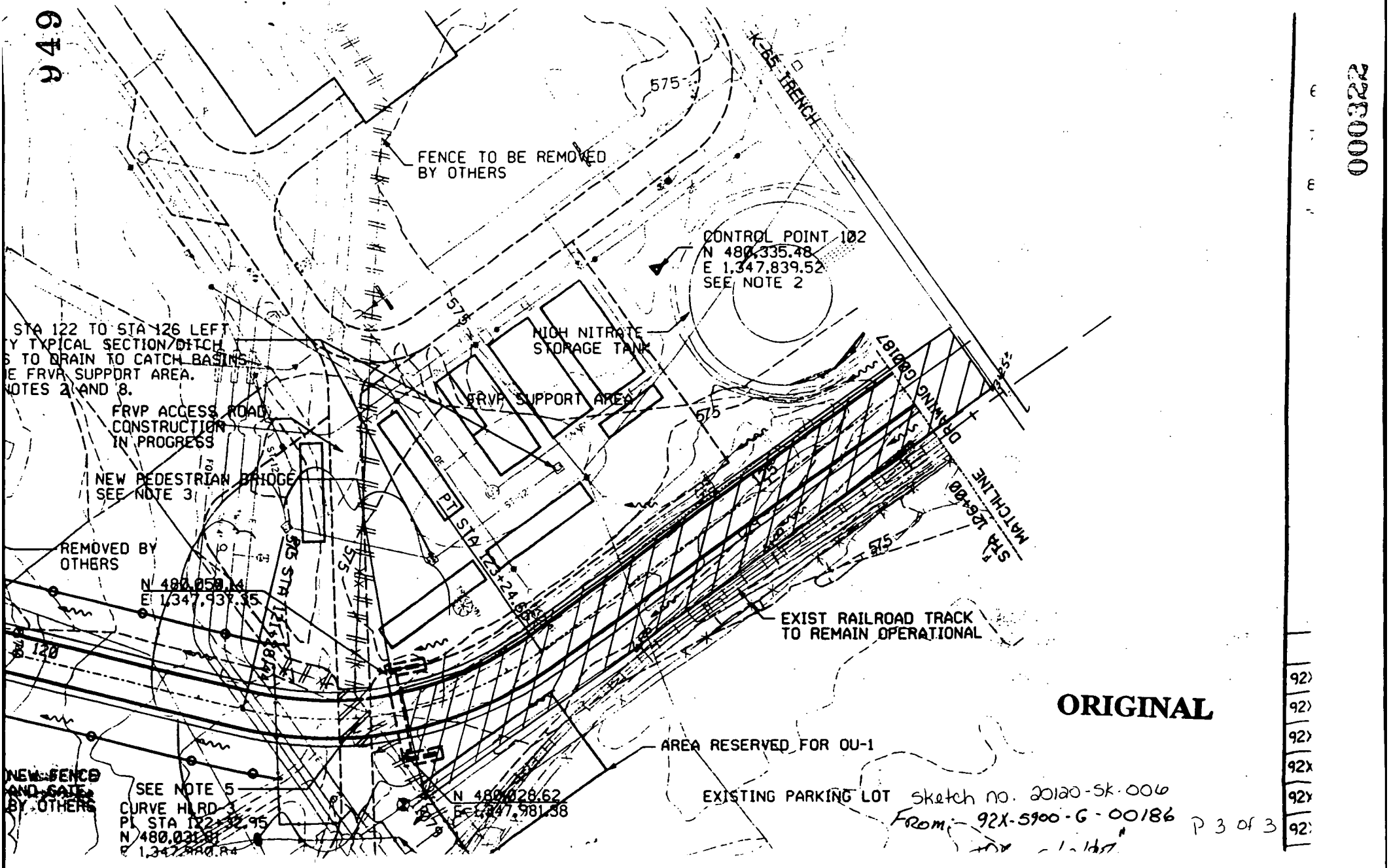


.....direct Barrett Paving to excavate structurally unsuitable soil to an elevation of 570' with side slopes of 1.5 to 1.0 beginning approximately at station 122+30 (N 480051.58). The floor of the excavation extending 12' to the left and the shoulder of the slope 45 feet to the right. The excavation continues to Station 126+00.00 (K-65 trench) 12 feet to the left and the shoulder of the right slope nearly as practicable to the railroad siding without undermining the railroad roadbed.

- BELOW ELEVATION 570' ANY EXCAVATION REQUIRED FOR PIPEWORK IS BY OTHERS.
- BACKFILL OPERATION OVER PIPES TO BE BY OTHERS TO AN ELEVATION OF 574'.
- BARRETT PAVING MATERIALS INC. TO FURNISH & INSTALL TEN-SAR MATERIAL ON THE FLOOR OF THE EXCAVATION AFTER FINE BLADING IS COMPLETED BY OTHERS.

ORIGINAL

Sketch no. 20120-SK-005
From 92Y-5900-G-00192-0



ORIGINAL

Sketch no. 20120-Sk-006

From: 92X-5900-G-00186

P 3 of 3

0003222

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1698/99	(2)S/C NO.: ~~ESC~~ 587	(5)Pg 1 OF 2	(6)DATE 5/19/97
(3)S/C TITLE: HAUL RD & REROUTED NORTH ENTR. RD.			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☒ OTHER☐	(4A)RCI/DCN TITLE: UNSUITABLE MATR'L. STA. 118 TO 121		(11)DCN NO.: 1698/99-016

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X5900-Q-00186		0	
92X5900-Q-00192		0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- UNSUITABLE MATERIAL IN "POCKETS" BETWEEN STA. 118 TO 121 NECESSITATE ADDITIONAL WORK TO ENSURE HAUL RD STABILITY IN THIS AREA. PREVIOUS REMOVAL OF UNSUITABLE MATERIAL (REF: DCN 1698/99-012) DID NOT TOTALLY SOLVE THE PROBLEM.
- RELIEVE WATER POCKETS AS SHOWN ON SKETCH 20120-SK-007
- PROVIDE GEOGRID AS PER DCN 1698/99-008 BETWEEN STA. 118 TO 121. GEOGRID SHALL BE PLACED ON TOP OF SUBGRADE BELOW TYPICAL SECTION.

(10)REQUESTOR: J. C. JENKINS COMPANY: FDF DATE: 5/19/97	(12)FCE / PE J. C. Jenkins DATE: 5/19/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons attached Approved as noted comment, Page 1 of 1
2) Record As-built conditions for installation of drainage trenches

(PARSONS) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder DATE: 5/20/97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CCR4
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE	
PERFORMANCE GRADE: (17) 4 James C. Jenkins	
(18)CONSTRUCTION CONCURRENCE: DATE: 5-20-97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:
PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)	

FS-F-4259 (10/01/96)

received 5-19-97

ORIGINAL

DCN 016

20 May, 1997

PO 158 Haul Road

DOC. No.: DCN 016 ISSUE: 1 TRANSMITTAL No.: 1698/99-016
Unsuitable Material Sta. 118 to 121.

Civil Comments
Approved as noted below:

1. Underdrains shall be installed according to ODOT Item 605.

2. Pipe to be 6-inch in diameter, perforated, and may be one of the following materials:

Corrugated Steel Underdrain Type III	707.01
Perforated Corrugated Polyethylene drainage tubing	707.15
PVC	707.17
Corrugated Aluminum Alloy Pipe, Type III	707.21

3. Pipe shall slope to a point of positive drainage at a minimum of 0.5%, with a minimum preferred slope of 2% if possible. While the Underdrain may discharge into the storm culvert bedding, it is preferred that it either tie directly into the storm culvert (in which case, the same pipe material used for the culvert shall be used for the Underdrain and be properly tied in) or beyond the storm culvert.

4. Aggregate shall be No. 8 or No.57 stone or gravel, 4-inches below the pipe to 3-feet above the pipe. Minimum trench width shall be 4-inches clear each side of the Underdrain. Aggregate shall be wrapped with a non-woven geotextile such as Amoco 4550 or equal as a minimum.

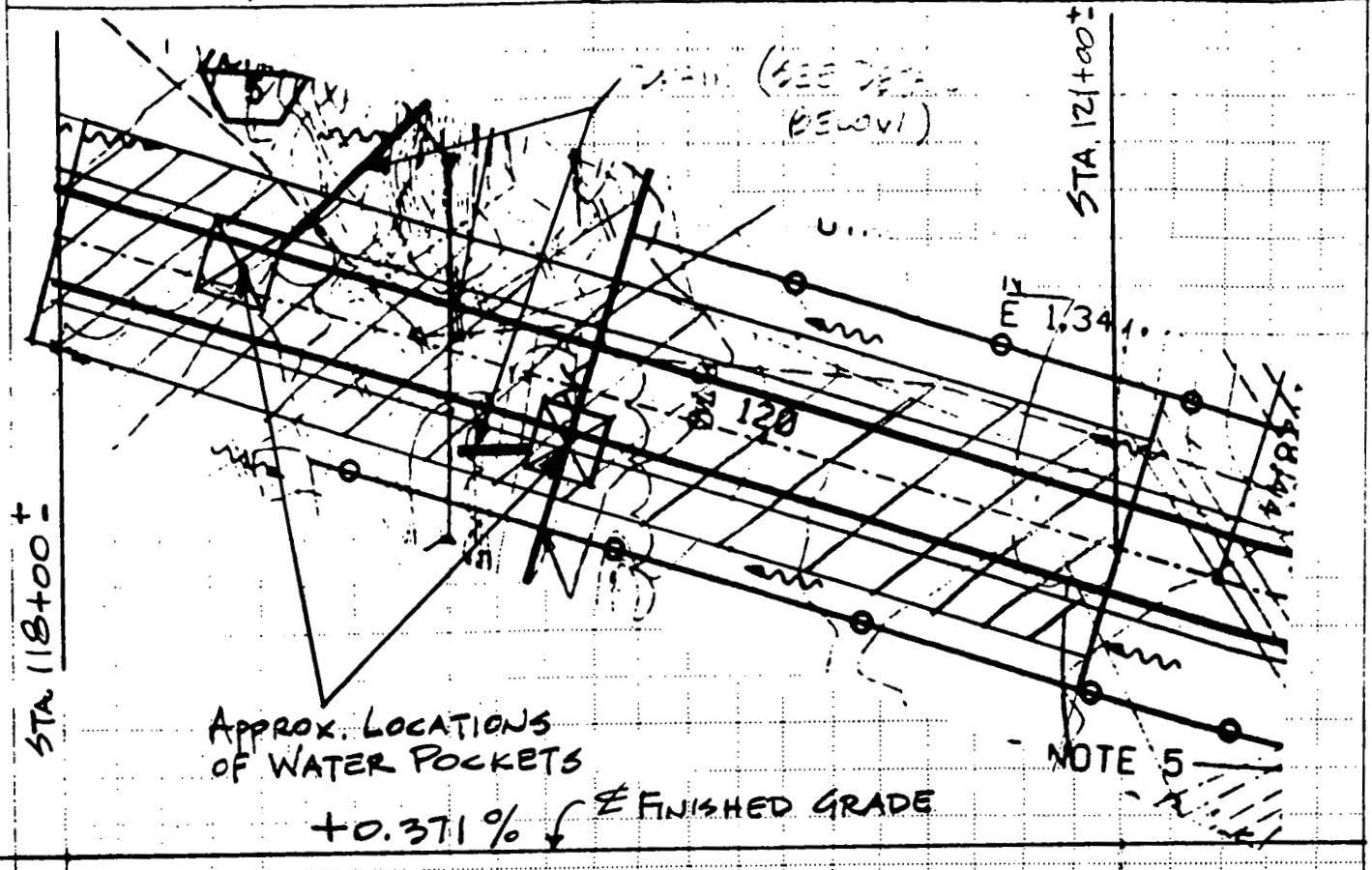
5. Aggregate bedding material below pipe shall be smoothed to a constant grade and compacted using a vibratory tamper. Aggregate placed around pipe shall be carefully tamped around circumference of pipe to ensure aggregate contact with the pipe. Aggregate fill above the pipe shall be compacted using a vibratory tamper.

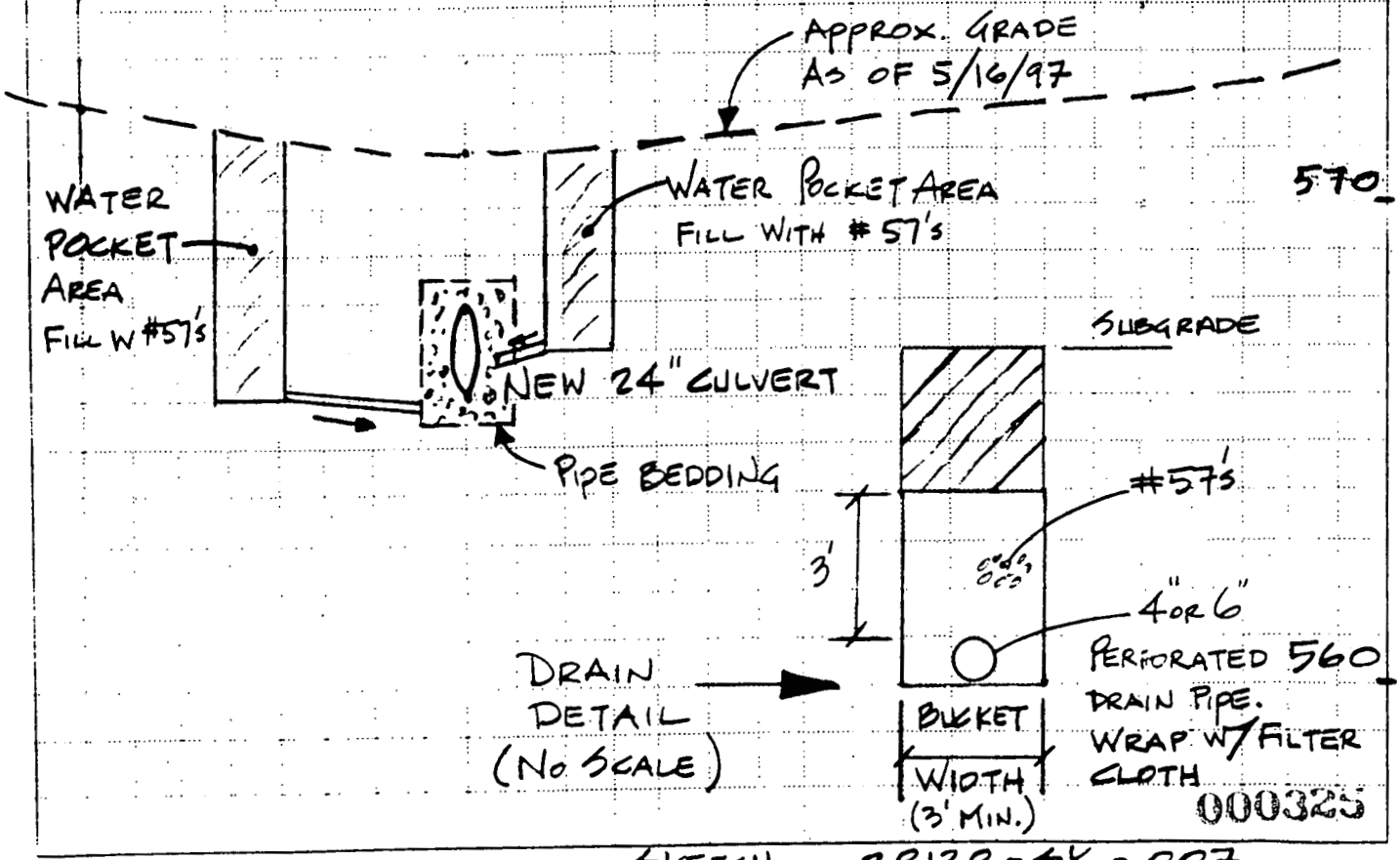
FERNALD
ENVIRONMENTAL RESTORATION
MANAGEMENT CORPORATION

ENGINEERING CALCULATION

PROJECT NUMBER: 2CCR4	
BY: JCJ	DATE: 5/16/97
CHECKED BY:	DATE:
PAGE	OF
REVISED:	

SUBJECT: HAUL ROAD SUBGRADE MOD





000325

SKETCH 20120-SK-007
SHEET 2 OF 2

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1698 / 1699	(2)S/C NO.: FSC-587	(5)Pg OF	(6)DATE 6/4/97
(3)S/C TITLE: Haul Road Construction			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☒ OTHER☐	(4A)RCI/DCN TITLE: Delete Utility Casings, Sta 128+25±		(11)DCN NO.: 1698/99-019

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
DWG. 92X-5900-G-00187	Sh. G0007	0	Note 7

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☐ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Remove from the Barrett scope of work, item to provide and install 3 schedule 40 steel casings for utilities. Conduits to have been 2-12"ø and 1-14"ø installed from co-ordinates N 480,565.81/E 1,348,020.10 to N 480,687.45/E 1,348,009.87. Utility Relocation and installation schedule has rendered the casings unnecessary.

(10)REQUESTOR: Jeff Ellis COMPANY: FDF DATE: 6/4/97

(12)FCE / PE: [signature] FOR J. SALYERS DATE: 6/4/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES

(14)FOR DCN: ☒ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons concurrence NOTE (Attached Page 1 of 1)

(Parsons) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder 6/17/97 DATE:

(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CNP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins DATE: 6/19/97

PERFORMANCE GRADE: (17) 4

(18)CONSTRUCTION CONCURRENCE: [signature] DATE: 6.4.97

(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)

FS-F-4258 (10/01/96)

ORIGINAL

received 6-5-97

DCN 019

Haul Road

DOCUMENT REVIEW COMMENT SHEET

SCEP P0158

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 6/16/97
DOCUMENT NO. AND TITLE: DCN-019 DELETE UTILITY CASINGS STA 128		DATE COMMENTS DUE:
REQUEST NO.: 1 / TRANSMITTAL NO.: 1698/99-019		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC /	COMMENT RESOLUTION
1	K Gerard		Agree that the 3 casings may be deleted vic. Sta. 128. the utilities will be installed by others and will not require the casing pipe.		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE- 949

(1)WP / WO NO: 1698 / 11699	(2)S/C NO: FSC-587	(3)PG 1 OF 1	(4)DATE 6/5/97
(5)S/C TITLE: Haul Road Construction			(11)RCI NO.:
(4) RESPONSIBLE DISCIPLINE: ☐ EO ☐ MO ☐ CO ☐ OTHER ☐	(4A)RCI/DCN TITLE: Change in Control Area Limits		(11)DCN NO.: 1698/99 - 020

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
Dwg. 92X-5900-G-00186	gh G0006	0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☐ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Move limits of controlled AREA from 119+50± to 126+25±. Cost savings realized from less restrictive Radiological control.

(10)REQUESTOR: Jeff Ellis COMPANY: FDF DATE: 6/6/97 (12)FCE / PE: [signature] for J. Salyers DATE: 6-5-97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons Approved as Noted Comment (Page 1 of 1)

(PARSONS) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder DATE: 6/17/97 (20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 6/19/97

PERFORMANCE GRADE: (17) 4 James C. Jenkins

(18)CONSTRUCTION CONCURRENCE: [signature] DATE: (21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

(19)PURCHASE REQUISITION REQUIRED: ☑ YES ☐ NO (19)

FS-F-4259 (10/01/96)

1997 JUN 27 PM 3:04

ORIGINAL

received

RH 6-6-97

DCN 020

000328

Haul Road

DOCUMENT REVIEW COMMENT SHEET

ARP P0158

SHE/OWNER:

REVIEWING DIVISION: PARSONS

DATE: 6/16/97

DOCUMENT NO. AND TITLE: DCN-020 CHANGE CONTROL AREA LIMITS

DATE COMMENTS DUE:

REQUEST NO.: 1 / TRANSMITTAL NO.: 1698/99-020

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC 1	COMMENT RESOLUTION
1	K. Gerard		RADIOLOGICAL CONTROL LIMITS ARE DETERMINED BY FDF. FOLLOW FDF REQUIREMENTS.		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE - 949

(1)WP / WO NO.:	(2)S/C NO.:	(5)Pg OF	(6)DATE
1698/99	FSC-587	1 1	6-10-97

(3)S/C TITLE: HAUL ROAD & REROUTED NORTH ENTRANCE ROAD

(11)RCI NO.:

(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☑ OTHER☐

(4A)RCI/DCN TITLE: BRIDGE CONTAMINATION STN. 155+50/162+27

(11)DCN NO.: 1698/99-021

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
CIVIL PLAN & PROFILE	92X-5900G00189	Ø	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☑ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

THIS DCN IS FOR BARRETT PAVING MATERIALS INC. TO INSTALL 51706 1 & 2 STONE W/ GEO-GRID MATERIAL FROM HAUL ROAD STATION 155+50 TO 162+27, PER ATTACHED WORK PLAN.
THIS IS SUPPLEMENTAL TO DCN. # 1698/99-008 AS IT PERTAINS TO WORK BETWEEN THESE STATIONS

(10)REQUESTOR:	COMPANY:	DATE:	(12)FCE / PE	DATE:
[illegible]	FDF	6-10-97	James C. Jenkins	6/10/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES

(14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons attached Comments Pages 1, 2, & 3 of 3

2) Record As-built conditions

(PARSONS) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Carlton Schroeder	6-24-97	

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE

PERFORMANCE GRADE: (17) 4 Michael Ahrens for Jim Jenkins 06/25/97

(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
Bill Zebrak 6/25/97			
PURCHASE REQUISITION REQUIRED: ☑ YES ☐ NO (19)			

F-4259 (10/01/96)

ORIGINAL

received
JUN 11 1997

DCN -21

Parsons

949

16 June 97

SRP PO158 Haul Road

DOC No.: DCN-021 ISSUE: 1 TRANSMITTAL No.: 1698/99-021

RE: Bridge Contamination Sta. 155+50 - Sta. 162+27
(20120-WP-0001)

Civil Comments are as follows:

In general, it is not clear as to the limit of Barrett's responsibility related to the work plan. If Barrett is to do all of the work, it is assumed that additional documents not included in the work plan reflect the specific work to be done. (The WP does not have enough detailed information from which to construct the improvements indicated.) Comments that follow are limited to the placement of stone.

1. Recommend that the #2 stone minimum depth be 6". Also recommend that a wider road be considered if it is to be used for backing dump trucks with stone from the North Access Road west to the controlled area. Will also need some radius, 30' min., at the North Access Road for turning vehicles. What subgrade preparation is required? Assume that more than the 6" of stone will be placed over the 12" culvert. (12" min.)

2. Also concerned that the dump trucks will have to stop, and start backing and turning while on the North Access Road. There is also the potential for having a full truck waiting to unload along the North Entrance Road. These are traffic safety concerns. We recommend that a pull off area and queue area be established off the North Entrance Road in the area east of the control area fence.

3. Concerned about the 1' depth of the #1 stone. The original ground line has been altered during the initial work in the area so it is hard to tell how the 1' thickness will impact final grade line of the road, given the typical pavement section, (See dwg. 92X-5900-G-00184). The minimum thickness should be 8" for the #1 stone. It is assumed that the intent of this DCN is to use the #1 stone as embankment material to bring the subgrade up to the level necessary to construct the typical pavement section. Recommend that the #1 stone depth be variable, 8" min., with a compacted elevation equal to the bottom of the aggregate base (Item 4, 6" ODOT 304 on dwg. G00184). The #1 stone will be considered to be embankment material and shall be constructed in accordance with ODOT Item 203.

4. Pumping ponded water into the existing catch basins is acceptable but expect to increase the sediment in the storm drain lines. Highly recommend that measures to limit silt from the suction end of the sump pump, such as silt fence or stone check dams, be used to filter some of the sediment in the water prior to pumping. Also inspect the receiving drainage

system with the Subcontractor prior to pumping and make the Subcontractor responsible for cleanup upon completion of the work back to its pre-pumping condition. This work activity should be reviewed by rad control as it should be expected that the water will be contaminated.

Parsons 949

23 June 97

SRP PO158 Haul Road

DOC No.: DCN-021 ISSUE: 1 TRANSMITTAL No.:1698/99-021

RE: Bridge Contamination Sta. 155+00 - Sta. 162+27
(20120-WP-0001)

Geotechnical Comments:

The work plan does not contain the details describing placement of geotextile/geogrid. DCN # 1698/99-008 describes geotextile/geogrid placement, and should be referenced in the work plan. Also, it is suggested that the work plan list additional geogrid installation guidance provided by the geogrid supplier (see Para. C) 3. of DCN # 1698/99-008).

File: F:\USER\FRD018\PO158\DCN-021

Haul Road Construction
Placement of Geotextile/Stone Bridge
Work Plan

20120-WP-0001

REV. 0

Mike Hickey, OSDF Project Manager — 06/05/97

Warren Hooper, SWP Construction Coach — 6/5/97

Lee McDaniel, SCEP Construction — 6/5/97

Bill Zebbick, OSDF Construction Coach — 6/5/97

Gregg Johnson, OSDF Safety Coach — 6/5/97

Mike Godber, OSDF QA Coach — 6-5-97 for Mike Godber

Jim Jenkins, OSDF Engineering — 6/5/97

06 05 97 1698/99

Haul Road Construction
Placement of Geotextile/Stone Bridge
Work Plan

1) INTRODUCTION

The purpose of this project is to bridge over the excavated portion of the Haul Road within the contamination Area from station 155 + 50 to station 162 + 27 along the Haul Road Construction Project to provide a suitable base for the construction of the Haul Road.

2) SCOPE

This work will include installing culvert, two (2) double wide gates, placing Geotextile Fabric/GeoGrid, the trucking and placement of stone, and the construction a soil berm within the same area.

The following is a sequence of steps to be performed during this project:

A. Upright and repair the construction boundary fence within the contamination area (as necessary).

B. ~~Cover the materials stockpile, containing material excavated from the above stated area, with a plastic tarp or similar material and secure it with sand bags.~~ A silt fence will be installed around the perimeter of the stockpile.

6/5/97 6/5/97 6/5/97

C. Pump the standing water from within the above stated excavated area to the existing manholes # CB 222 and MH 43, immediately south of the Haul Road excavation area, station 160 + 00±.

D. Install a culvert (12") in the ditch along the North Access Road east of the above stated excavation area. This culvert will be removed by other at a later date.

E. Install a double wide gate in the security fence line for access into the certified area and the Haul Road excavation area.

F. Place 4-6 inches of #2 stone, 12 feet wide from the north access road to the radiological area boundary fence (inner security fence).

G. Deliver the GEOTEXTILE fabric and GeoGrid to an area just east of the radiological area boundary fence for placement from east (uncontrolled area) to west in the contaminated area.

H. Smooth out any rough spots in the Haul Road using an excavator bucket. The track end of the excavator is to remain on clean placed material. Upon completion of the task the excavator bucket will be wrapped and moved to the decontamination area.

Haul Road Construction
Placement of Geotextile/Stone Bridge
Work Plan

I. Place the GEOTEXTILE fabric and GeoGrid over the smoothed out area. The width of this area is approximately 100 feet (50 feet on each side the center line). Place ODOT #1 (1.5 - .3.5 inch gradation) stone, 1 foot thick over the initial length of the fabric and GeoGrid. The gravel trucks will back to the work area and dump the stone proceeding with coverage from the east (uncontrolled) to the west. The stone will then be worked with a dozer to level the material. All equipment will operate from the gravel base (clean area) during this placement.

J. Construct a soil berm, minimum of 18" wide, 18" high, along the north side of the Haul Road as the gravel base is constructed to prevent runoff from the contaminated stockpile that is located north of the Haul Road excavation.

K. As the work progresses from the east (uncontrolled area) to the west the radiological boundary will be moved under the direction of the radiological control technician (RCT).

ASSUMPTIONS AND PROJECT REQUIREMENTS

A. All personnel will follow the requirements listed in the H&S Matrix for the Haul Road construction and Radiological Work Permit (RWP) for the work to be performed.

B. Minimum Personal Protective Equipment for work in a construction area:

1. Safety Glasses
2. Hard hats
3. Hearing protection (as required)
4. Safety shoes
5. Gloves (as required)

C. Radiological surveys will be performed at the start of work and as needed during the performance of work.

D. Construction management will ensure that all requirements of the project specific Health and Safety Matrix for the Haul Road is followed by all personnel at the job site.

E. Air monitoring will be performed as needed during construction (as delineated on the RWP).

F. Access to the work area for ingress/egress and for hauling will be from the north access road only. Personnel access to the contamination area will be through the Building 79 contamination area control point.

Haul Road Construction
Placement of Geotextile/Stone Bridge
Work Plan

G. Construction activities will be limited to within the designated (fenced or roped) construction area with the exception of pumping water ~~and covering the stockpile~~.

H. The project will require interfacing and support from the following individuals:

1. Industrial Hygiene - Jack Patrick
2. Health and Safety Officer - Jeff Middaugh (Ray Webber - Alternate)
3. Radiological Control - Dan Stempfley
4. Security - Paul Disney
5. OSDF and SCEP Personnel

I. Project management will ensure site personnel are aware of altered traffic control along the north access road.

J. The FDF Labor Broker (WISE Construction) will provide the labor for pumping ponded water, and installing ingress/egress gates. FDF will provide all required material, equipment, and tools necessary for this work.

K. A pre-construction meeting will be held to review the project scope of work, status of materials, tools, equipment, safety requirements, and coordination of the work to be done prior to mobilization for the work.

L. All permits will be obtained by FDF.

M. After completion of the bridged area, the gravel and fabric placed in the east certified area (from the north access road to the radiological area fenceline) will be removed.

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE. 949

(1)WP / WO NO:	(2)S/C NO:	(3)PG OF	(4)DATE
1698 / 1699	F3C-587	1 / 1	6/27/97

(5)S/C TITLE: Haul Road Construction — (11)RCI NO.:

(4) RESPONSIBLE DISCIPLINE: EO MO CE OTHER — (4A)RCI/DCN TITLE: Soil Pile 1 Use — (11)DCN NO.: 1698/99-022

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00189	Sh. G0009	0	

(9) ☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9) ☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Excess soil from the Haul Road Process Area segments may be stored in SP-1 as needed. To place soil in the pile:
- Remove the chain link perimeter fence on the west side of SP-1.
- Install silt fence on the North, East, & South sides of SP-1 and around catch basins.
- Build SP-1 west from the existing pile performing compaction and dust control as needed & using construction fence to delineate the perimeter.
- Construct chain link fence with locking gates around SP-1 when use by the Haul Road project is complete, install silt fence & crusting agent to control silt.

(10)REQUESTOR: Debbie Ng COMPANY: FDF DATE: 6/27/97 — (12)FCE / PE: S.A. Kunstmann DATE: 7/3/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES — (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

Soils placed in SP-1 should meet the OSD7 WAC. Soils excavated from either posted or modeled areas (ie potentially exceed WAC) should be surveyed by rad techs. If survey is <1000 dpm, place in segregated location immediately west of existing topsoil pile. Soils from other areas should be placed immediately west of this segregated (<1000 dpm) pile. Susan Long

See Additional Parsons Comments attached as Page 1 of 1

(Parsons) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder 7/21/97 DATE: — (20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) S.A. Kunstmann DATE: 7/21/97

PERFORMANCE GRADE: (17) 45

(18)CONSTRUCTION CONCURRENCE: DATE: — (21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

PURCHASE REQUISITION REQUIRED: ☐ YES ☒ NO (19)

FS-F-4258 (10/01/96)

ORIGINAL

received 7-9-97

DCN 032

000338

HAUL ROAD

DOCUMENT REVIEW COMMENT SHEET

P0158

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 7/11/97
DOCUMENT NO. AND TITLE: 1698/99-022 SOIL PILE 1 USG.		DATE COMMENTS DUE:
REQUEST NO.: 1/DCN-022		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC /	COMMENT RESOLUTION
1	YUNUS AFSHAR		• FOR DUST CONTROL SEE SUBPART G OF BID DOCUMENT.		
			• CLEAN SILT WHEN 1/3 HIGHT OF SILT FENCE IS FILLED.		
			• STOCK PILE CONSTRUCTION MATERIALS & DEBRIS (OTHER THAN SOIL). PER FOF DIRECTION, MAY BE TO A DIFFERENT LOCATION.		
2.	K. GERARD		• FOLLOW FOF DIRECTION REGARDING CONTROL OF RADIOLOGICAL IMPACTED MATERIAL.		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

PARSONS
ERA PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:	
DCN022	1	1642/99.022	7-10-97	
TITLE: SOIL PILE 1 USE			OU NO. 2	P.O. No.: 158

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 7 / 14 / 97
DUE DATE

TO REVIEWERS:

1. Check the attached document against issued specifications to ensure that this document meets the intent of our specs.
2. Date and Initial this card, in red ink, as to the status.
3. Hand carry the attached document and this card to the Project Engineer.
4. If comments are needed, mark the original document in red ink.
5. The Project Engineer will return the completed document and card to Document Control.

Note: If you are in a remote location, call the Project Engineer for pick-up.

ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
• 1	CIVIL YUNUS AFSHAR / K. GERARD 7/10/97	7/11/97		YA / KG	
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
• 2	ENVIRONMENTAL, SAFETY, & HEALTH DEAN G.	7/21/97	DG		
	HVAC				
	GEOTECHNICAL				
• 4	QUALITY ASSURANCE BILL D.	7/21/97	WD1		
• 3	PROJECT ENGINEER C. SCHROEDER	7/21/97		CS	
	TITLE III MANAGER				
	PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

Transmitted to Client — Date: — Initials:

Document Control — Date: — Initials:

* ORIGINATING PROJECT DESIGN ENGINEER C. SCHROEDER

SPECIAL INSTRUCTIONS:

6/97

000340

REQUEST FOR CLARIFICATIONOF INFORMATION/ DESIGN CHANGE NOTICE

(1) WP / WO NO.: 1698 / 1699 | (2) S/C NO.: FSC-587 | (3) PG 1 OF 45 | (5) DATE 6/27/97

(3) S/C TITLE: Haul Road Construction | (11) RCI NO.:

(4) RESPONSIBLE DISCIPLINE: EO ☐ MO ☐ CE ☒ OTHER ☐ | (4A) RCI/DCN TITLE: Ditch Backslope GRADE | (11) DCN NO.: 1698/99-023

(7) DOCUMENTS AFFECTED	(7) DOCUMENT NOS.	(7) REV.	(8) OTHER
92X-5900-G-00228	G0013	0	

(9) ☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9) ☐ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

At the utility pole near sta 111+50% on the North Access Rd, increase the backslope of the ditch to a maximum of 1.5:1 to prevent undermining the pole. Warp backslope to meet proposed 2:1 backslope 10' to 20' from the Pole. No change to ditch locations orelevations.

(10) REQUESTOR: Jeffrey Perkins COMPANY: FDF DATE: 6/27/97

(12) FCE / PE: [signature] DATE: 7/3/97

(13) RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES

(14) FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons Attached Comment (Page 1 of 1) and Attached Sketch

61.6 M

RCI - DCN ACCEPTANCE

(Parsons)

(15) DESIGN ORGANIZATION APPROVAL: Carlton Schroeder DATE: 7/11/97

(20) CHARGE NO. FOR CADD SERVICES TO INCORPORATE:

(16) FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) [signature] DATE: 7/17/97

PERFORMANCE GRADE: (17) 45

(18) CONSTRUCTION CONCURRENCE: DATE:

(21) WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

PURCHASE REQUISITION REQUIRED: ☐ YES ☒ NO (19)

FS-F-4258 (10/01/96)

ORIGINAL

DELETE

received PGP 7-7-97

DCN 023

DOCUMENT REVIEW COMMENT SHEET

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 7/11/97
DOCUMENT NO. AND TITLE: Haul Road - DCN 1698/99-023		DATE COMMENTS DUE:
REQUEST NO.:		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC /	COMMENT RESOLUTION
1	Y. AFSHAR		KEEP THE 2:1 BACK SLOPE TO ELEV 610. FROM ELEV 610 ON UP USE 1.5:1 BACK SLOPE. SEE ATTACHED SKETCH		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

PARSONS
ERA PROJECT

ROUTING CARD

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:	
DCN-023	1	1698/99-023	7/8/97	
TITLE: Ditch Road Construction			OU NO. 2	P.O. No.: 188

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 7 / 9 / 97
DUE DATE

TO REVIEWERS:

1. Check the attached document against issued specifications to ensure that this document meets the intent of our specs.
2. Date and Initial this card, in red ink, as to the status.
3. Hand carry the attached document and this card to the Project Engineer.
4. If comments are needed, mark the original document in red ink.
5. The Project Engineer will return the completed document and card to Document Control.

Note: If you are in a remote location, call the Project Engineer for pick-up.

ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
01	CIVIL Y. AFSHAR	7/10/97		YA	
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
• 2	ENVIRONMENTAL, SAFETY, & HEALTH M. CHROSTOWSKI	7/11/97	LB		
	HVAC				
	GEOTECHNICAL				
• 3	QUALITY ASSURANCE B. UBBES	7/11/97	QUA		
• 4	PROJECT ENGINEER C. SCHROEDER	7/11/97		CS	
	TITLE III MANAGER				
	PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

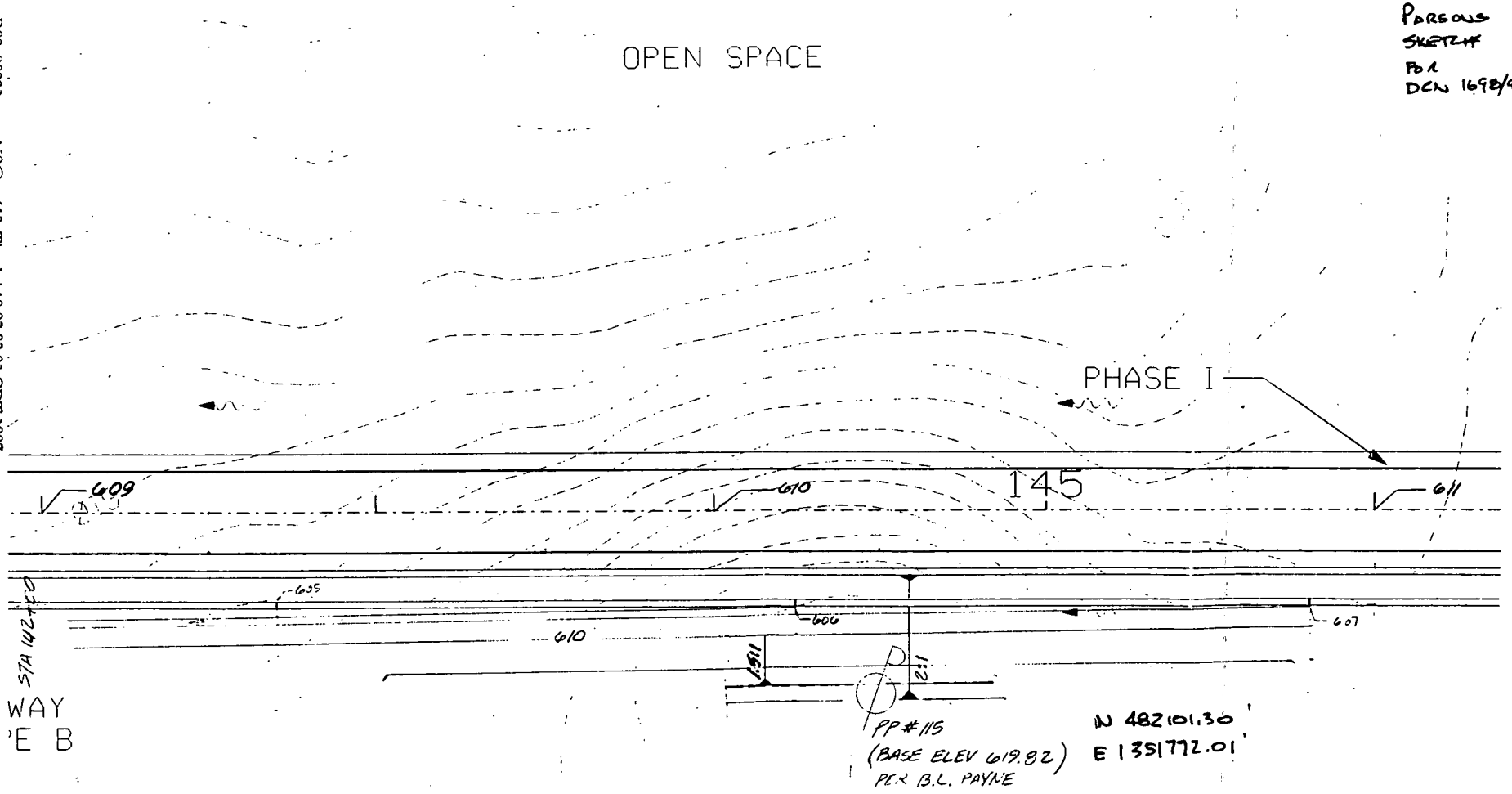
Transmitted to Client	Date:	Initials:
Document Control	Date:	Initials:
• ORIGINATING PROJECT DESIGN ENGINEER		C. SCHROEDER

SPECIAL INSTRUCTIONS:

4/97 SNC123

1"=30'

PARSONS
SKETCH
FOR
DCN 1698/99-023



(K)

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1698/1699	(2)S/C NO.: FSC-587	(5)Pg OF 1 / 1	(6)DATE 7/3/97
(3)S/C TITLE: Haul Road			(11)RCI NO.: 1698/99-0XX
(4) RESPONSIBLE DISCIPLINE: EO MO CX OTHER	(4A)RCI/DCN TITLE: Sta 148+15 Conduit		(11)DCN NO.: 1698/99-025

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00188	G0008	0	
92X-5900-G-00110 ET	G0024	0	

(9) ☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9) X DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Provide and install 12"x60' CMP conduit at sta 148+15 +/- to avoid rainwater ponding in the former "B" Street Rail spur Railbed. Install pipe to meet existing grade at the bottom of Railroad ties. Add pipe to plan and profile in 92X 5900-G-00188 and pipe schedule in 92X-5900-G-00110. As built north and south invert coordinates. Backfill trench per standard detail.

(10)REQUESTOR: Jess Kelly COMPANY: FDF DATE: 7/3/97

(12)FCE / PE: Jess Kelly DATE: 7/3/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES

(14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons Attached Comments (Page 1 of 1)

1997 JUL -8 AM 9:19

(PARSONS)

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder DATE: 7/10/97

(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CCR4

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE

PERFORMANCE GRADE: (17) James C. Jenkins 7/14/97

(18)CONSTRUCTION CONCURRENCE: DATE:

(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

PURCHASE REQUISITION REQUIRED ☒ YES ☐ NO (19)

D9K 028

received 7-7-97

ORIGINAL

000345

BOEING

949

DOCUMENT REVIEW COMMENT SHEET

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 7/9/97
DOCUMENT NO. AND TITLE: Haul Road		DATE COMMENTS DUE:
REQUEST NO.: DCN No. 1698/99-025		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC 1	COMMENT RESOLUTION
1	Y. AFSHAR		~~PROVIDE MIN 18" COVER OVER PIPE.~~ PROVIDE FLARED END SECTIONS AND RIPRAP ON BOTH SIDES OF THE CULVERT PER DESIGN DRAWINGS. KEEP RECORDS FOR AS BUILT CONDITION. (INLET, OUTLET INVERTS ELE & COORDINATES) PROVIDE MIN. 12" COVER BETWEEN TOP OF PIPE AND BOTTOM OF PAVEMENT SECTION		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

PARSONS
ERA PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:	
DCN-025	1	1698/99-025	7/8/97	
TITLE: STA 148+15 CONDUIT			OU NO. 2	P.O. No.: 158

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 7 / 9 / 97
DUE DATE

TO REVIEWERS:

1. Check the attached document against issued specifications to ensure that this document meets the intent of our specs.
2. Date and Initial this card, in red ink, as to the status.
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4. If comments are needed, mark the original document in red ink.
5. The Project Engineer will return the completed document and card to Document Control.

Note: If you are in a remote location, call the Project Engineer for pick-up.

ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
• 1	CIVIL Y. AFSHAR	7/9/97		YA	
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
• 2	ENVIRONMENTAL, SAFETY, & HEALTH M. CHROWSDK	7/9/97	AZ		
	HVAC				
	GEOTECHNICAL				
• 3	QUALITY ASSURANCE B. UBBES	7/10/97	WW		
• 4	PROJECT ENGINEER C. SCHROEDER	7/10/97		CS	
	TITLE III MANAGER				
	PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

Transmitted to Client	Date:	Initials:
Document Control	Date:	Initials:
* ORIGINATING PROJECT DESIGN ENGINEER		C. SCHROEDER

SPECIAL INSTRUCTIONS:

000347

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1698/1699	(2)S/C NO.: FSC-587	(5)Pg 1 OF 1	(6)DATE 7/9/97
(3)S/C TITLE: Haul Road			(11)RCI NO.: 1698/99-011R
(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C X OTHER☐	(4A)RCI/DCN TITLE: N. Access Sta 159+00 - 164+00 Typical Section		(11)DCN NO.: 1698/99-026

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00219	G0004	0	

(9)X RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9) _ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

The area from Sta. 159+00 through 164+00 has a soft subgrade. Will a 12" (minimum) blanket at the base of the fill of #2 stone, 40' wide, on a Tensar 1200 geogrid provide adequate footing in the soft conditions?

(10)REQUESTOR: COMPANY:	DATE:	(12)FCE / PE	DATE:
Jeff Kellis FDF	7/9/97	J. C. Jenkins	7/9/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☒ NO ☐ YES (14)FOR DCN: ☒ APPROVED ☐ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons Clarifying comment - Attached as Page 1 of 1

2) Record As-Built Conditions

(Parsons)

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL:	DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Carlton Schroeder	7/10/97	2CCR4

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 7/14/97

PERFORMANCE GRADE: (17)4 James C. Jenkins

(18)CONSTRUCTION CONCURRENCE:	DATE:	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)			

DCN #6

received 7-10-97

ORIGINAL 000348

DOCUMENT REVIEW COMMENT SHEET

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE:
DOCUMENT NO. AND TITLE: Haul Road - 1698/99-011R		DATE COMMENTS DUE:
REQUEST NO.:		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC /	COMMENT RESOLUTION
1	Y. AFSHAR		BRIDGING OVER THE SOFT AREA WOULD BE ONE OPTION AT THIS TIME. ANY PROBLEM ENCOUNTERING IN FUTURE, AN UNDERDRAIN SYSTEM WILL BE EVALUATED.		
2	K. ERNST		SUGGEST THAT DCN-008(Pg 158) BE REFERENCED, AS APPLICABLE, FOR GUIDANCE REGARDING PLACEMENT OF GEOGRID.		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

6000349

FOUNDATION AND SERVICES DIVISION

949

PARSONS
ERA PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:	
CR-022	1	1698/99-026	7-10-97	
TITLE: N. ACCESS STA 159+00-164+00 TYPICAL SECTION			OU NO. 2	P.O. No.: 158

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 7 / 10 / 97
DUE DATE

TO REVIEWERS:

1. Check the attached document against issued specifications to ensure that this document meets the intent of our specs.
2. Date and Initial this card, in red ink, as to the status.
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ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
01	CIVIL YUNUS ARSHAD	7/10/97		YA	
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
	ENVIRONMENTAL, SAFETY, & HEALTH				
	HVAC				
• 2	GEOTECHNICAL K. ERNST	7/10/97		KE	
	QUALITY ASSURANCE				
• 3	PROJECT ENGINEER C. SCHROEDER	7/10/97		CS	
	TITLE III MANAGER				
	PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

Transmitted to Client	Date:	Initials:
Document Control	Date:	Initials:
* ORIGINATING PROJECT DESIGN ENGINEER		C. SCHROEDER

SPECIAL INSTRUCTIONS:

000350

6/97

ENG 125

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1698/1699	(2)S/C NO.: FSC-587	(5)Pg 1 OF 1	(6)DATE 7/9/97
(3)S/C TITLE: Haul Road			(11)RCI NO.: 1698/99-013R
(4) RESPONSIBLE DISCIPLINE: ED MD CX OTHER D	(4A)RCI/DCN TITLE: Sta 155+50-157+80 Typ. Cross Section		(11)DCN NO.: 1698/99-027

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00184	G0004	0	

(9)X RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)_ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

For cross sections on the Old D&D concrete pad, is ODOT 301 Bituminous Aggregate base an acceptable substitute for ODOT 304 Aggregate base?

(10)REQUESTOR: [signature] COMPANY: FDF DATE: 7/9/97 (12)FCE / PE: J. C. Jenkins DATE: 7/9/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons Comments attached as Page 1 of 1

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Carlton Schroeder (PARSONS) 7/21/97	2CCR4
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE	
PERFORMANCE GRADE: (17) 5 James C. Jenkins 7/21/97	
(18)CONSTRUCTION CONCURRENCE: DATE: 5-21-97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:
PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)	

received 7-10-97

ORIGINAL

EXTENDED 2L

ENTERED

Haul Road

DOCUMENT REVIEW COMMENT SHEET

PO 158

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 7/11/97 / 7/19/97
DOCUMENT NO. AND TITLE: 1698/99-027 Sta 153+50 to 157+00 typ Cross Section		DATE COMMENTS DUE:
REQUEST NO.: 1 / DCN-027		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC 1	COMMENT RESOLUTION
1.	Y. AFSHAR	•	Apply ODOT item 407 Tack Coat on top of existing Concrete and/or Manufacturers recommendation) MIN. 0.1 gal/sy MAX 0.5 gal/sy		
		•	Make sure conc. surface is dry & clean before application of the Tack coat.		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

25003

PARSONS
ERA PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:	
DCN-027	1	1698/99-027	7/11/97	
TITLE: STA 155+50-157+80 TYP. CROSS SECTION			OU NO. 2	P.O. No.: 158

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 7 / 14 / 97
DUE DATE

TO REVIEWERS:

1. Check the attached document against issued specifications to ensure that this document meets the intent of our specs.
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ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
• 1	CIVIL YUNUS ABHAR / K. GERRARD	7/11/97		YA/KG	
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
• 2	ENVIRONMENTAL, SAFETY, & HEALTH MIKE C.	7/21/97	DZ		
	HVAC				
	GEOTECHNICAL				
• 4	QUALITY ASSURANCE BILL U.	7/21/97	WCU		
• 3	PROJECT ENGINEER C. SCHROEDER	7/24/97		CS	
	TITLE III MANAGER				
	PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

Transmitted to Client	Date:	Initials:
Document Control	Date:	Initials:
* ORIGINATING PROJECT DESIGN ENGINEER		SCHROEDER

SPECIAL INSTRUCTIONS:

000353

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1698/1699	(2)S/C NO.: FSC-587	(5)Pg 1 OF 1	(6)DATE 7/10/97
(3)S/C TITLE: Haul Road			(11)RCI NO.: 1698/99-XXX
(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☒ OTHER☐	(4A)RCI/DCN TITLE: Sta 129+45 Utility Conduit Elevation		(11)DCN NO.: 1698/99-029

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00187	G0007	0	

(9)☐RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☒ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Install the 8" Sch. 40 conduit at Sta. 129+45 at 573.50' rather than 568.66' to avoid conflict with the SN-3 pipe from the LCS Project.

Record "As-Built" conditions.

(10)REQUESTOR: Jeff Kellis	COMPANY: FDF	DATE: 7/10/97	(12)FCE / PE: J. C. Jenkins	DATE: 7/10/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

See Parsons Attached Comment Page 1 of 1

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder (PARSONS)	DATE: 7/21/97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CUP5	
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins			DATE 7/21/97
PERFORMANCE GRADE: (17) 5			
(18)CONSTRUCTION CONCURRENCE: Leni Salyers	DATE: 7-21-97	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE)	DATE:
PURCHASE REQUISITION REQUIRED: ☐ YES ☒ NO (19)			

ORIGINAL

received RCI 7-11-97

ENTERED

000354

HAUL ROAD

DOCUMENT REVIEW COMMENT SHEET

P0158

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 7/19/97
DOCUMENT NO. AND TITLE: 1698/99-029, STA 129+45 Utility Conduit		DATE COMMENTS DUE:
REQUEST NO.: 1 /DCN-029		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC 1	COMMENT RESOLUTION
1	Y. AFSHAR		AT INV. ELEVATION OF 573.50' THE 8" SCH 40 CONDUIT WILL NOT HAVE THE MIN. 3.50' COVER AT THE DICHES ON BOTH SIDES OF THE HAUL ROAD. SUGGEST INSTALLING THE CONDUIT AT INV. ELEVATION OF 572.00'.		
2	K. GERARD		THE 8" SCH40 CONDUIT NEEDS TO HAVE 3.5' MIN. COVER AND HAVE A MIN. CLEARANCE OF 1.5' FROM THE SN-3" LINE. COORDINATE WITH" LCS' SUBCONTRACTOR.		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

000353

949

PARSONS
ERA PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:	
DCN-029	1	1698/99-029	7-11-97	
TITLE: STA 129+45 UTility CONDUIT ELEVATION			OU NO. 2	P.O. No.: 188

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 7 / 14 / 97
DUE DATE

TO REVIEWERS:

1. Check the attached document against issued specifications to ensure that this document meets the intent of our specs.
2. Date and Initial this card, in red ink, as to the status.
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ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
• 1	CIVIL YUNUS AFSHAR / K. GERARD 7/15/97	7/15/97		YA/KG	
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
• 2	ENVIRONMENTAL, SAFETY, & HEALTH MIKE C.	7/21/97	MC		
	HVAC				
	GEOTECHNICAL				
• 3	QUALITY ASSURANCE Bill U	7/21/97	WU		
• 4	PROJECT ENGINEER Carlton S.	7/21/97		CS	
	TITLE III MANAGER				
	PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

Transmitted to Client	Date:	Initials:
Document Control	Date:	Initials:
* ORIGINATING PROJECT DESIGN ENGINEER		SCHROEDER

SPECIAL INSTRUCTIONS:

6/97

ENG 123

000356

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1698/1699	(2)S/C NO.: FSC-587	(5)Pg 1 OF 1	(6)DATE 7/8/97
(3)S/C TITLE: Haul Road			(11)RCI NO.: 1698/99-012R
(4) RESPONSIBLE DISCIPLINE: EO MO CX OTHER	(4A)RCI/DCN TITLE: Sta 139+00-156+00 Grading		(11)DCN NO.: 1698/99-031

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00188	G0008	0	
92X-5900-G-00189	G0009	0	

(9)X RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)_ DCN-JUSTIFICATION,EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

- Radiological concerns in the area preclude additional excavation for the construction of the Haul Rd.
- Sparse vegetation on clayey soil poses no concern.
- Contractor to construct road to design elevations and grades ensure positive drainage to new or existing catch basins without ditching.

(10)REQUESTOR: Jeff Kellis COMPANY: FDF DATE: 7/8/97

(12)FCE / PE: James C. Jenkins DATE: 7/8/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☒ NO ☐ YES

(14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons Clarifying Comments Attached as Page 1 of 1 (with initial Submittal as an RCI)

2) See Parsons Additional Comments Attached as Page 1 of 1 (with this DCN)

(PARSONS) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder DATE: 7/24/97 (DCN) 7/10/97 (RCI)

(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CCR4

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) James C. Jenkins DATE 7/14/97

PERFORMANCE GRADE: (17) 5

(18)CONSTRUCTION CONCURRENCE: DATE:

(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

PURCHASE REQUISITION REQUIRED: ☐ YES ☒ NO (19)

RCI 177

ORIGINAL

received 7-8-97

Haul Road

DOCUMENT REVIEW COMMENT SHEET

P0158

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 7/23/97
DOCUMENT NO. AND TITLE: DCN No1698/99-031 STA 139+00 TO 156+00 GRADING		DATE COMMENTS DUE:
REQUEST NO.: 1 / DCN-031		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC 1	COMMENT RESOLUTION
1.	Y. AFSHAR		RCI NO. 1698/99-012R CHANGED TO A DCN.		
2.	K. GERARD		SEE COMMENTS ON RCI 1698/99 -012R HH 7-10-97		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

000358

949

DOCUMENT REVIEW COMMENT SHEET

SHE/OWNER:	REVIEWING DIVISION: PARSONS	DATE: 7/10/97
DOCUMENT NO. AND TITLE: Haul Road RCI 1648/99-012R		DATE COMMENTS DUE:
REQUEST NO.:		

ITEM NO.	REVIEWER NAME	PAGE NO./ STEP	COMMENT	SRC /	COMMENT RESOLUTION
1	Y. AFSHAR		PROOFROLL AREA (PER DESIGN DWGS) FOR SOFT SPOTS. ANY SOFT AREA ENCOUNTERED MUST BE STABILIZED SUBGRADE MUST BE COMPACTED IN ACCORDANCE WITH THE DESIGN DOCUMENTS.		
2	K ERNST		SEE NOTE ABOVE		

SIGNIFICANT REVIEW COMMENT RESOLUTION APPROVAL SIGNATURE: _____ DATE: _____

00359

PARSONS
ERA PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:	
DCN-031	1	1698/99-031	7/23/97	
TITLE: STA 139+00 TO STA 156+00 GRADING			PROJ. No.: 2	P.O. No.: 158

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 7 / 24 / 97
DUE DATE

TO REVIEWERS:

1. Check the attached document against issued specifications to ensure that this document meets the intent of our specs.
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ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
• 1	CIVIL YUNUS AFSHAR /K.GORADIA	7/23/97		YA KG	
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
• 2	ENVIRONMENTAL, SAFETY, & HEALTH MIKE C.	7/25/97	RA		
	HVAC				
	GEOTECHNICAL				
• 4	QUALITY ASSURANCE Bill U.	7/25/97	RD		
• 3	PROJECT ENGINEER Carlton S.	7/24/97		CS.	
	TITLE III MANAGER				
	PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

Transmitted to Client	Date:	Initials:
Document Control	Date:	Initials:
• ORIGINATING PROJECT DESIGN ENGINEER		SCHROEDER

SPECIAL INSTRUCTIONS:

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1698/1699	(2)S/C NO: FSC-587	(5)Pg 1 OF 1	(6)DATE 7/17/97
(3)S/C TITLE: Haul Road			(11)RCI NO.: 1698/99-XXX
(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☒ OTHER☐	(4A)RCI/DCN TITLE: Sta. 137+00 through 139+75 Right Ditch		(11)DCN NO.: 1698/99-032

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00187	G0007	0	
92X-5900-G-00188	G0008	0	
92X-5900-G-00194	G0013	0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER

(9)☒ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

Delete proposed right ditch Sta. 137+00 through Sta. 139+75.

Grade 137+00 through 137+50± to drain to proposed rt. ditch @ sta. 137+00.

Grade 137+50± through 139+75± to drain to existing ditch.

Record "As-Built" conditions.

(10)REQUESTOR: Bill Ellis COMPANY: FDF DATE: 7/17/97 (12)FCE / PE James C. Jenkins DATE: 7/17/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons comments attached as Page 1 of 1

(PARSONS)

RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder DATE: 7/21/97 (20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: ZCCR4

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE 7/21/97

PERFORMANCE GRADE: (17) James C. Jenkins

(18)CONSTRUCTION CONCURRENCE: DATE: 7-21-97 (21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)

FS-F-4259 (10/01/96)

ORIGINAL

received 7-17-97 4:37 PM

000361

21 Jul 97

PO158 Haul Road

DCN:032 ISSUE: 1 TRANSMITTAL No.: 1698/99-032
TITLE: STA. 137+00 Through 139+75 Right Ditch

Civil comments are as follows:

The ditch slopes were set as shown on the drawings based on a maximum allowable velocity of 2 fps to keep the rate of runoff towards Paddys Run low. It is our understanding that ditch modifications are necessary due to the construction of a water line for the Locomotive Maintenance Facility.

1. Recommend that it be confirmed that there will be a minimum of 3 feet of cover (3.5' preferred) over the new water line. Coordinate with OU-1 Construction.

2. Recommend that the right ditch in the referenced area be directed to the catch basins adjacent to TS-4. Steeper ditches would be acceptable as they drain towards the SWRB.

3. The catch basins adjacent to TS-4 should have silt fence barriers to limit sediment. (This should have been done as part of DCN 1698/99-014).

4, Use the propose shoulder slope as the minimum slope to the ditch and 3:1 as the maximum. Minimum depth of the ditch should be 12".

PARSONS
ERA PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:	
OCU-032	1	1695/99-030	7-15-97	
TITLE: STA. 137+00 THROUGH 139+75 RIGHT DITCH			OU NO. 2	P.O. No.: 188

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 7 / 21 / 97
DUE DATE

TO REVIEWERS:

1. Check the attached document against issued specifications to ensure that this document meets the intent of our specs.
2. Date and Initial this card, in red ink, as to the status.
3. Hand carry the attached document and this card to the Project Engineer.
4. If comments are needed, mark the original document in red ink.
5. The Project Engineer will return the completed document and card to Document Control.

Note: If you are in a remote location, call the Project Engineer for pick-up.

ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
01	CIVIL H. AFSHAR, K. GERARD	7/21/97		RG	
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
02	ENVIRONMENTAL, SAFETY, & HEALTH MIKE L.	7/21/97	MJL		
	HVAC				
	GEOTECHNICAL				
• 4	QUALITY ASSURANCE BILL VARNES	7/21/97	WVA		
• 3	PROJECT ENGINEER CARLTON S.	7/21/97		CS	
	TITLE III MANAGER				
	PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

Transmitted to Client	Date:	Initials:
Document Control	Date:	Initials:
• ORIGINATING PROJECT DESIGN ENGINEER		SCHROEDER

SPECIAL INSTRUCTIONS:

4/97

000363

ENG 123

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1698/1699	(2)S/C NO.: FSC-587	(5)Pg 1 OF 6	(6)DATE 7/22/97
(3)S/C TITLE: Haul Road			(11)RCI NO.: 1698/99-XXX
(4) RESPONSIBLE DISCIPLINE: E☐ M☐ C☒ OTHER☐	(4A)RCI/DCN TITLE: Gross Decon Pad Relocation II		(11)DCN NO.: 1698/99-033

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00189	G0009	0	
92X-5900-G-00195	G0014	O	
92X-5900-G-00196 92X-5900-G-00204	G0015 G0020	0 0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9)☒ DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE JRE 7/22/97

THIS DCN SUPERSEDES DCN NO: 1698/99-028 (GROSS DECON PAD).

1. Construct Haul Road in the Old D&D area to finish grades on Sketch #20120-SK-012.
2. Relocate Gross Decon Pad to Sta. 157+83 to 158+58.
3. Construct Decon Pad per attached plan and typical sketches. Note modification to tapers, 50' vs. original 75'.
4. Delete ODOT Item 605 Underdrain and ODOT Item 606 Guardrail from proposed design. Provide concrete barriers (Jersey Barriers or similar) in lieu of guardrail.
5. Place ODOT Item 304 leveling course on existing gravel base. Shape to drain to CB-12 and CB-13.
6. Construct Inlet protection for CB-12 and CB-13 per attached sketch.
7. Record "As-Built" conditions.

(10)REQUESTOR: [illegible] COMPANY: FDF DATE: 7/22/97 (12)FCE / PE James C. Jenkins for DAK DATE: 7/22/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

1) See Parsons attached Comments - Page 1 of 1

2) Record As-Built Condition's

(PARSONS) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder DATE: 7/23/97 (20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CCR4

(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE

PERFORMANCE GRADE: (17) 5 James C Jenkins for DAK 7/24/97 7/24/97

(18)CONSTRUCTION CONCURRENCE: DATE: (21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)

FS-F-4259 (10/01/96)

ORIGINAL

received 7-22-97

000364

PARSONS
Sheet 1 of 1

22 July 97

PO-158 Haul Road

DOC. No.: DCN-033 ISSUE: 1 TRANSMITTAL No.: 1698/99-033
TITLE: Gross Decon Relocation II

Civil Comments are as follows:

1. As written, the DCN does not explain the need to use the alignment shown on sketch # 20120-sk-012. The proposed profile requires more fill (gravel) than previous profile (6" at sta. 156+00 to 15" at sta. 161+00.) Recommend using previous profile submitted under DCN No. 1698/99-024 unless otherwise justified.

2. If the profile submitted under DCN No. 1698/99-024 is not viable, this needs to be indicated by stating that DCN 1698/99-033 supersedes 1698/99-024. (Before Parsons Civil can concur, justification needs to be provided.)

3. Confirm that the elevation and the +0.39% grade at the end of the road is acceptable to OSDF Construction.

4. Profile shown can be modified (assuming a steeper grade is acceptable to OSDF) to lessen fill material. This can be done by adding vertical curves, changing the elevations of PVI's and lengthening curves. Evaluate the use of existing excess material (gravel) placed in the area of the gross decon pad. Note that the contractor has indicated a potential claim for additional work and material so it is prudent to minimize the additional material and use existing material to the extent possible. Note that if the excess material in the area can not be used for this or other work, it should be considered waste and that it will cost FDF to dispose of it in the OSDF.

BARRETT PAVING MATERIALS INC.
7374 MAIN STREET • CINCINNATI, OH 45244 • (513) 271-6200 • FAX (513) 271-2875

July 17, 1997

Fluor Daniel Fernald
7400 Willey Road
Fernald, Ohio 45030

Attn.: Lou Wehlitz

Re: D & D grading work
Haul Road

Dear Mr. Wehlitz,

This letter is to inform you that per Mr. Warren Hooper's directive, we've submitted a technical submittal with respect to modified grades within the D & D area. Its to our understanding that the grades within the D & D area were raised to preclude any excavation and to accommodate the revised location of the Decontamination Pad. The submittal references DCN-024 and DCN-028. We believe that there will be additional work required to perform the work as per the changed grades and we will inform you as to the order of magnitude after our full evaluation.

If you have any questions in regard to the above, please contact this office.

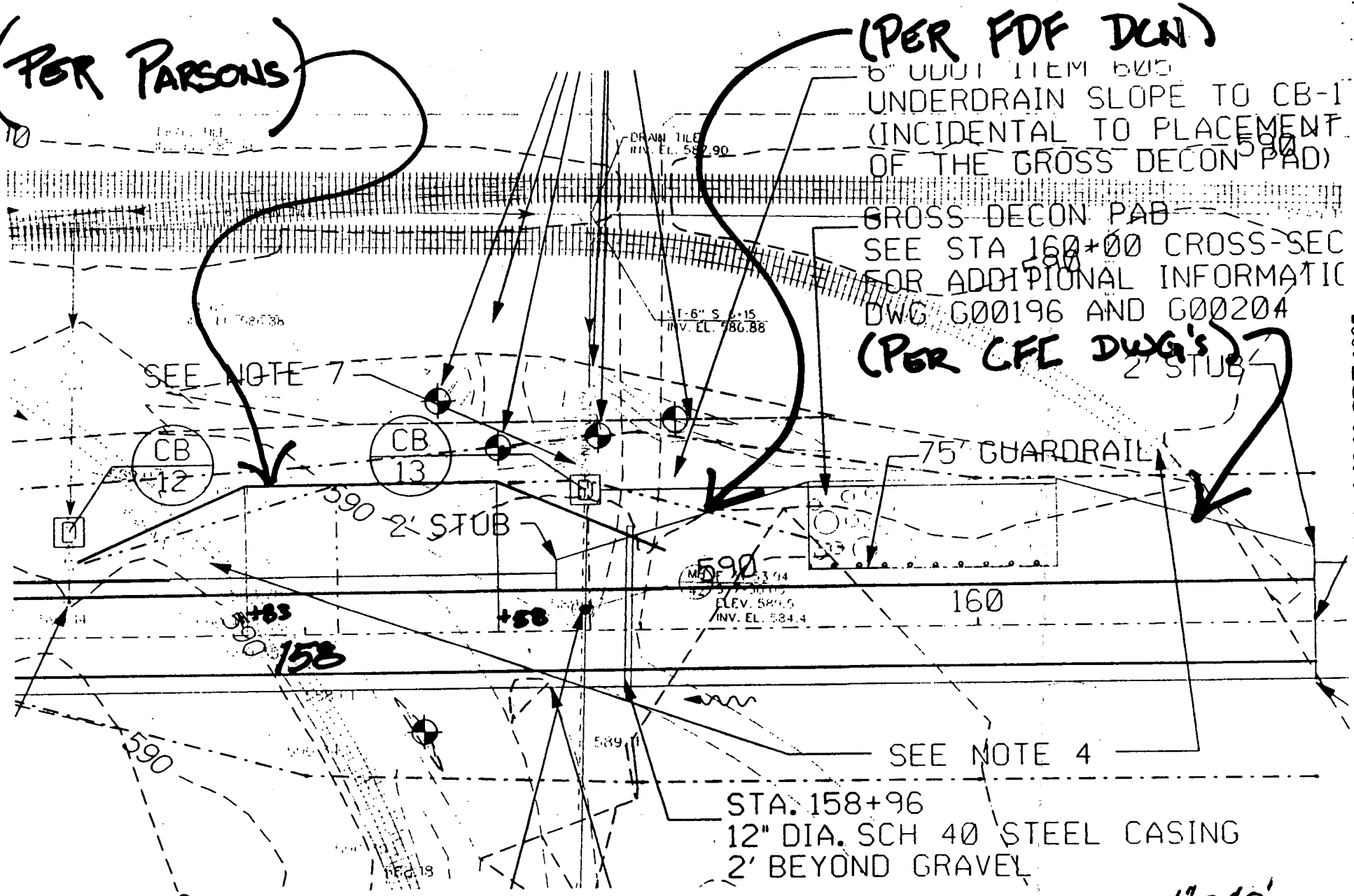
Very Truly Yours,
Barrett Paving Materials Inc.

Alex T. Saplala
Project Manager

a:\fd780.doc

cc: Jim Salyers
Rick Holbrook

Sketch # 20120-SK-013
DCN 1698/99-033



Sketch for DCN-028
1698/1699-028 Issue: 1
Dike Haul Road

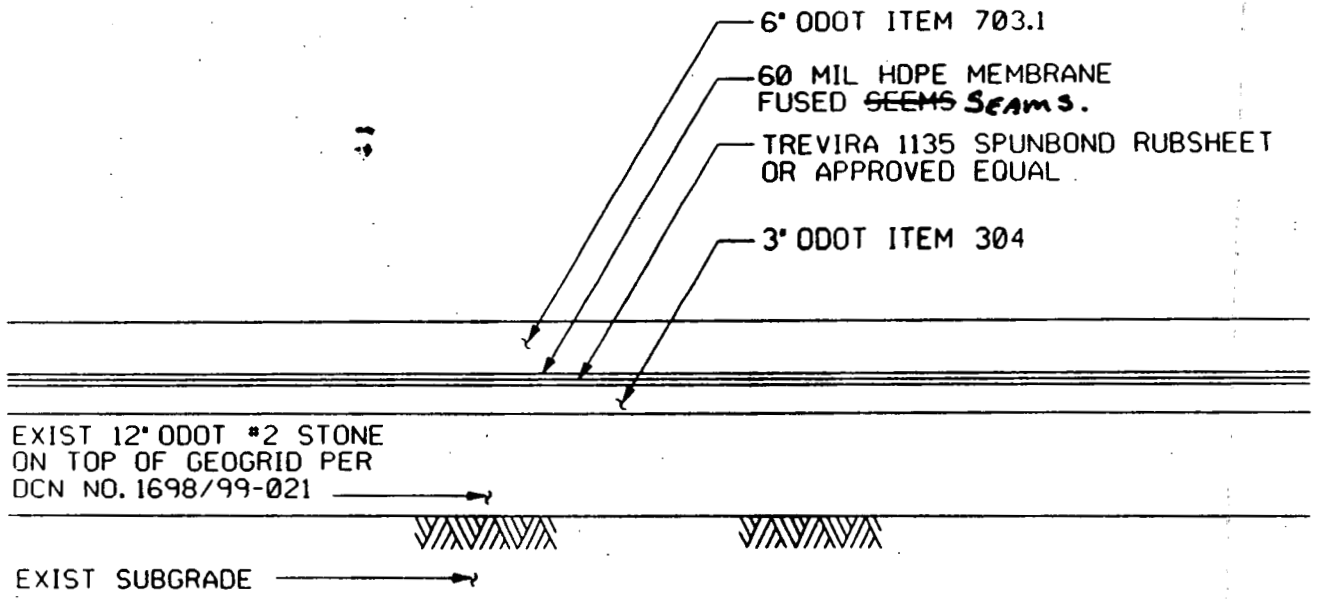
SHEET 1 of 3

Sketch# 20120-SK-014

DCN 1698/99-033

DCN NO.: 1698/99-~~028~~ Void JRE 7/22/96

GROSS DECON PAD RELOCATION



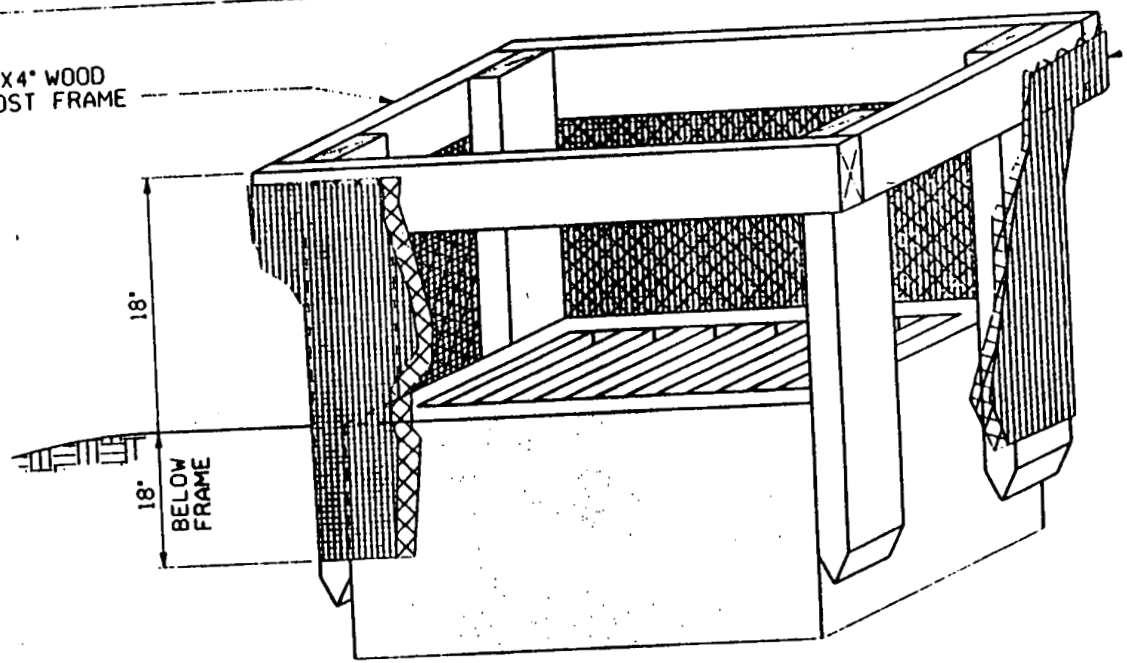
DECON PAD - TYPICAL SECTION

000368

949

Sketch 2 of 3

Sketch# 20120-SK-015
DCN 1698/99-033



ISOMETRIC VIEW

NOTES:

FILTER FABRIC SHALL HAVE AN EQUIVALENT OPENING SIZE OF 20-40 SIEVE AND BE RESISTANT TO SUNLIGHT.

~~COMPACT BACKFILL AROUND INLET IN 6" LIFTS.~~

~~THE TOP OF THE WOOD FRAME SHALL BE AT LEAST 6" BELOW ADJACENT ROADS IF PONDING WATER WOULD BE A TRAFFIC HAZARD.~~

IF NECESSARY, A COMPACTED EARTH DIKE SHALL BE CONSTRUCTED DOWNSTREAM OF THE INLET TO PREVENT BYPASSING OF RUNOFF. DIKE SHOULD BE 6" HIGHER THAN TOP OF WOOD FRAME.

NON-CURBED INLET PROTECTION DETAIL

NOT TO SCALE

skg022

Sketch 3-of3

000369

9469

PARSONS
ERA PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:
DCN-033	1	1698/99-033	7/22-97
TITLE: Gross Docum. Relocation-II		OU NO. 2	P.O. No.: 158

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 7 / 23 / 97
DUE DATE

TO REVIEWERS:

1. Check the attached document against issued specifications to ensure that this document meets the intent of our specs.
2. Date and Initial this card, in red ink, as to the status.
3. Hand carry the attached document and this card to the Project Engineer.
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ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
01	CIVIL YUNUS AFSHAR	7/22/97		YA	
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
02	ENVIRONMENTAL, SAFETY, & HEALTH MIKE C.	7/23/97	MC		
	HVAC				
	GEOTECHNICAL				
03	QUALITY ASSURANCE Bill U / Phil P.	7/23/97	PP		
04	PROJECT ENGINEER Carlton S.	7/23/97		CS	
	TITLE III MANAGER				
	PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

Transmitted to Client	Date:	Initials:
Document Control	Date:	Initials:

* ORIGINATING PROJECT DESIGN ENGINEER

SPECIAL INSTRUCTIONS:

4/97

ENG 023

000370

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1698/99	(2)S/C NO.: FSC-587	(5)Pg 1 OF 1	(6)DATE 7/24/97
(3)S/C TITLE: North Access Road			(11)RCI NO.: 1698/99-XXX
(4) RESPONSIBLE DISCIPLINE: EO MO CX OTHER O	(4A)RCI/DCN TITLE: Sta. 211+00 Utility Sleeve		(11)DCN NO.: 1698/99-034

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00226	G0011	0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9) X DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

1. Install at Sta. 211+00± a conduit for future utility use.
2. Conduit will be provided by FDF.
3. Typical bedding and backfill.
4. Invert @centerline to be 595.5', end inverts to meet proposed ditch bottom elevations at 211+10± left and 210+90± right.
5. **Do Not** provide flared end sections or rock bank protection at conduit ends.
6. Record "As-Built" conditions.

(10)REQUESTOR: [illegible] COMPANY: FDF DATE: 7/24/97	(12)FCE / PE: James C. Jenkins DATE: 7/25/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

See Parsons "Approved as Noted" comments attached as page 1 of 1

RCI - DCN ACCEPTANCE

(PARSONS) (15)DESIGN ORGANIZATION APPROVAL: Carlton Schroeder DATE: 8/12/97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 2CCRA
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) PERFORMANCE GRADE: (17) 5 James C. Jenkins DATE: 8/13/97	
(18)CONSTRUCTION CONCURRENCE: [signature] DATE: 8-13-97 PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)	(21)WORK COMPLETED: (SIGNOFF BY FCE OR PE) DATE:

FS-F-4259 (10/01/96)

DCN 34

received 7-25-97

ORIGINAL

CIRCLE

PARSONS
PAGE 1 of 1

28 July 97

PO158 North Access Road

DCN - 034 ISSUE: 1 TRANSMITTAL No.: 1698/99-034
TITLE: STA. 211+00 UTILITY SLEEVE

Civil comments are as follows:

1. As described in the DCN, the conduit will serve as a culvert if the ends are not sealed. This is not acceptable as it will overload the culverts at sta. 200+90. Conduit should have a minimum of 3' cover at the proposed ditch elevations.

2. Any utility line that will run through the conduit will obstruct flow in the ditches, and would also be exposed to freezing.

3. Conduit type and diameter are not specified. May not have sufficient cover.

4. Area may be in an area that has not yet been certified clean. Area is to have all underground utilities removed as part of the Area 1, Phase II remediation. Suggest installation of the conduit in a certified clean area.

PARSONS
ERA PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:
DCN-034	1	1698/99-034	7/28/97
TITLE: STA. 211+00 UTILITY SLEEVE			PROJ. No.: 2 / P.O. No.: 158

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 7 / 30 / 97
DUE DATE

TO REVIEWERS:

1. Check the attached document against issued specifications to ensure that this document meets the intent of our specs.
2. Date and Initial this card, in red ink, as to the status.
3. Hand carry the attached document and this card to the Project Engineer.
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ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
• 1	CIVIL YUNUS AFSHAR / KEN GERARDO	7/28/97		YA/KG	
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
• 2	ENVIRONMENTAL, SAFETY, & HEALTH MIKE C.	8/12/97	DS		
	HVAC				
	GEOTECHNICAL				
• 4	QUALITY ASSURANCE Bill V.	8/12/97	WVV		
• 4/3	PROJECT ENGINEER CARLTON S.	8/12/97		CS	
	TITLE III MANAGER				
	PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

Transmitted to Client	Date:	Initials:
Document Control	Date:	Initials:
* ORIGINATING PROJECT DESIGN ENGINEER		SCHROEDER

SPECIAL INSTRUCTIONS:

5/96

ENC (2)

000374

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1698/99	(2)S/C NO.: FSC-587	(5)Pg 1 OF 1	(6)DATE 7/25/97
(3)S/C TITLE: North Access Road			(11)RCI NO.: 1698/99-XXX
(4) RESPONSIBLE DISCIPLINE: EO MO CX OTHER	(4A)RCI/DCN TITLE: Sta. 164+05 Conduit Extension		(11)DCN NO.: 1698/99-035

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00224	G0009	0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9) X DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

1. When installing the CMP conduit extension near Sta. 164+05, skew the outlet north-east away from the existing utility pole. Center the flow line between the pole and the guy anchor.
2. If the proposed band coupling is too rigid to allow the 5°± skew, angle cut the pipe end(s) and provide a concrete collar in place of coupling.
3. Record "As-Built" conditions.

(10)REQUESTOR: COMPANY: DATE:	(12)FCE / PE DATE:
[illegible] FDF 7/25/97	James C. Jenkins 7/28/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

see Parsons attached comments - Page 1 of 1

(PARSONS) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: DATE:	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE:
Carlton Schroeder 8/11/97	2CCR4
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE:	
PERFORMANCE GRADE: (17) 5 James C. Jenkins 8/12/97	
(18)CONSTRUCTION CONCURRENCE: DATE:	(21)WORK COMPLETED: (SIGN OFF BY FCE OR PE) DATE:
[illegible] 8-12-97	
PURCHASE REQUISITION REQUIRED: ☒ YES ☐ NO (19)	

FS-F-4259 (10/01/96)

DCN 035

ORIGINAL

received 7-28-97

CCELIB

6 August 97

PO158 North Entrance Road

DCN - 035 REV: 0 TRANSMITTAL No.: 1698/99-035
TITLE: STA. 164+05 CONDUIT EXTENSION

Recommend Status B, Approved as noted. Civil comments are as follows:

1. Install the new pipe at approximately 5° at the tie-in point to the existing culvert. Install the flared end section as in the original design plans. Center the flow line between the recently installed pole and the guy wire. Provide 18" thick dumped rock type C to about 10-Ft beyond the pole.

2. Record "As-Built " conditions.

PARSONS
ERA PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:	
DCN 035	1	1698/99-035	7/29/97	
TITLE: STA. 164+05 Conduit Ext.			OU NO. 2	P.O. No.: 158

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 7 / 30 / 97
DUE DATE

TO REVIEWERS:

1. Check the attached document against issued specifications to ensure that this document meets the intent of our specs.
2. Date and Initial this card, in red ink, as to the status.
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ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
• 1	CIVIL YUNUS A, KEN G.	8/8/97		KG, YA	
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
• 2	ENVIRONMENTAL, SAFETY, & HEALTH MIKE C.	8/11/97	NA		
	HVAC				
	GEOTECHNICAL				
• 4	QUALITY ASSURANCE Bill U.	8/11/97	WU		
• 3	PROJECT ENGINEER CARLTON S.	8/11/97		CS	
	TITLE III MANAGER				
	PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

Transmitted to Client	Date:	Initials:
Document Control	Date:	Initials:
* ORIGINATING PROJECT DESIGN ENGINEER		SCHRUGDER

SPECIAL INSTRUCTIONS:

6/97

ENG 123

000377

REQUEST FOR CLARIFICATION OF INFORMATION / DESIGN CHANGE NOTICE -

(1)WP / WO NO.: 1698/99	(2)S/C NO.: FSC-587	(5)Pg 1 OF 1	(6)DATE 7/25/97
(3)S/C TITLE: Haul Road			(11)RCI NO.: 1698/99-XXX
(4) RESPONSIBLE DISCIPLINE: E☐ M☐ CX OTHER☐	(4A)RCI/DCN TITLE: Sta. 139+00 - 156+00 Subbase		(11)DCN NO.: 1698/99-037

(7)DOCUMENTS AFFECTED	(7)DOCUMENT NOS.	(7)REV.	(8)OTHER
92X-5900-G-00188	G0008	0	
92X-5900-G-00189	G0009	0	

(9)☐ RCI - INQUIRY ☐ USQD SCREENING BY PROJECT ENGINEER (9) X DCN-JUSTIFICATION, EXISTING CONDITION & REQUESTED/PROPOSED CHANGE

1. Contractor will proof roll the subbase sta. 139+00 - 156+00.
2. Identify areas not meeting compaction requirements to the Construction Engineer.
3. The CE will approve areas to be stabilized as recommended by the design organization.
4. The areas will be covered with geo-fabric system.
5. Fill in the identified areas will be compacted ODOT Item 304 Aggregate Base.
6. Record "As-Built" conditions.

(10)REQUESTOR: Jeff Kells COMPANY: FDF DATE: 7/28/97	(12)FCE / PE James C. Jenkins DATE: 7/28/97

(13)RESPONSE: FOR RCI, IS A DCN REQ'D? ☐ NO ☐ YES (14)FOR DCN: ☐ APPROVED ☒ APPROVED AS NOTED ☐ DISAPPROVED

See attached notes dated 29 July '97.

(PARSONS) RCI - DCN ACCEPTANCE

(15)DESIGN ORGANIZATION APPROVAL: DATE: 8/4/97	(20)CHARGE NO. FOR CADD SERVICES TO INCORPORATE: 20084
(16)FDF PE ACCEPTANCE & VERIFICATION THAT ALL REQUIRED REVIEWS ARE COMPLETE: (DCN ONLY) DATE: 8/11/97	
PERFORMANCE GRADE: (17) 5 James C. Jenkins	
(18)CONSTRUCTION CONCURRENCE: DATE:	(21)WORK COMPLETED: (SIGN OFF BY FCE OR PE) DATE:
PURCHASE REQUISITION REQUIRED? ☐ YES ☒ NO (19)	

FS-F-4259 (10/01/96)

ORIGINAL

received 7-29-97

29 July 97

PO158 Haul Road

DCN - 037 ISSUE: 1 TRANSMITTAL No.: 1698/99-037
TITLE: STA. 139+00 - STA.156+00 SUBBASE

Civil comments are as follows:

1. This DCN supersedes RCI No. 1698/99-012R, DCN No. 1698/99-031 and RCI No. 1698/99-015R.

2. Contractor shall proofroll subgrade of Road area (the entire road. Not only STA.139 to STA.156) for soft spots per ODOT item 203.14 in accordance with construction drawings.

3. All fill material shall be compacted to 95% standard proctor per ASTM D698, in accordance with design drawings.

4. Contractor shall identify location and measure the limits of the areas not meeting compaction requirements.

5. The geofabric shall be Tensar 1200 geogrid or approved equal.

6. The contractor shall make sure that during the grading and compaction process enough space is left for the construction of item No. 10 of the typical road section (12" compacted subgrade ODOT item 203).

7. This DCN is approved as noted above.

PARSONS
ERA PROJECT

ROUTING CARD

949

DOC. No.:	ISSUE:	TRANSMITTAL No.:	DATE:	
DCN-037	1	1098/99-037	7-29-97	
TITLE: STA 139+00 - 156+00 SUBBASE			OU NO. SRP	P.O. No.: 158

REVIEW REQUEST, COMPLETE, AND RETURN TO PROJECT ENGINEER

BY 7 / 31 / 97
DUE DATE

TO REVIEWERS:

1. Check the attached document against issued specifications to ensure that this document meets the intent of our specs.
2. Date and Initial this card, in red ink, as to the status.
3. Hand carry the attached document and this card to the Project Engineer.
4. If comments are needed, mark the original document in red ink.
5. The Project Engineer will return the completed document and card to Document Control.

Note: If you are in a remote location, call the Project Engineer for pick-up.

ROUTING SEQUENCE	REVIEWING DISCIPLINE	DATE	STATUS 'A'	STATUS 'B'	STATUS 'C'
	PROCESS				
	MECHANICAL PROCESS				
	PIPING				
	STRUCTURAL				
• 1	CIVIL YUNUS AFSHAR / KEN GELLARD	7/29/97		YA/KG	
	ELECTRICAL				
	INSTRUMENTATION				
	MATERIAL HANDLING				
	ARCHITECTURAL				
• 3	ENVIRONMENTAL, SAFETY, & HEALTH MIKE CHLOWSKI	7/31 97	DE		
	HVAC				
• 2	GEOTECHNICAL KEVIN ERNST	7/31/97	KE		
• 5	QUALITY ASSURANCE BILL VARGES	8/4/97	WV		
• 4	PROJECT ENGINEER CARLTON SCHROEDER	8/04(97)		MHS	
	TITLE III MANAGER				
	PROJECT MANAGER				

STATUS 'A' = APPROVED
STATUS 'B' = APPROVED AS NOTED
STATUS 'C' = DISAPPROVED AS NOTED

Transmitted to Client	Date:	Initials:
Document Control	Date:	Initials:
* ORIGINATING PROJECT DESIGN ENGINEER		C. SCHROEDER

SPECIAL INSTRUCTIONS:

6/97

ENG 123

000380

F SEWAGE TREATMENT
STRUCTION BY OTHERS)

From 92X-5900-G-00266

ARKER (TYP)
0257
RESERVED
FUTURE STP

575
COMH 7
FT 30
FT 29
SEE NOTE 3 (TYP)
REMOVE AND REPLACE
EXIST CHAIN LINK FEN
55' R
FQ-12"
STRAW BALE BARR
SEE DWG G0025
R11
FT 28
575

CONTAINMENT

BM-51-A-1
N 479231.59
E 1348010.68

2
G00259

C

MATCH LINE FOR CON

4"/8" LEACHATE
GW 1 SEE NOTE 13
FQ-12"
DW-6"
FG-6"
4
G00259
2

SEE DWG G00257 (TYP)
LOCATION OF EXIST 6"
FUEL GAS LINE
EXCAVATE WITH CAUTION

4 END PIPE DETAIL
G00410 DW-6" N 479139.44, E
FQ-12" N 479143.53, E

AREA RESERVED
SEE NOTE 3

GW 10
FT 27
FT 26
R10
GW 11
12" PIV
V51001
R=40'
R=25'
SEE NOTE 12
GW 2
575
FT 25
FT 24
1
G00259
MAINT
EXIST
(POTA
THE

4"/8" FUTURE TAP HDPE DBL
CONTAINMENT PIPE
FABRICATED TEE AND
6' LG STUB END WITH
END CAP ON BOTH PIPES
PLACE THRUST BLOCK
BEHIND TEE (SEE DETAIL
ON DWG G00257)
GW 3
R9
FT 23
COMH 6

MOLDED END CAP
N 479100.±
E 1348312.±

3 TIE-IN DETAIL
G00410 N 479089
E 1348276

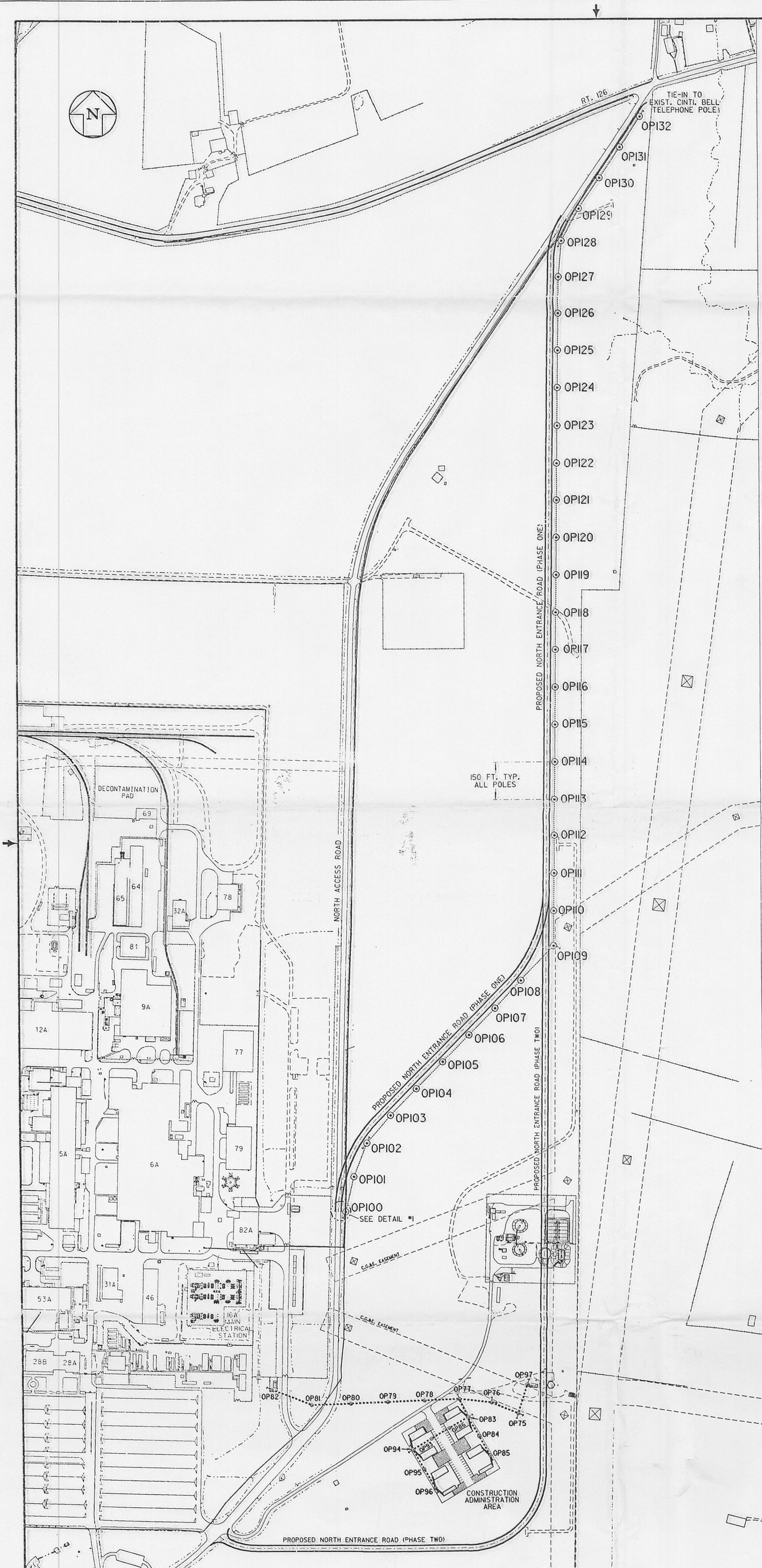
FT 15

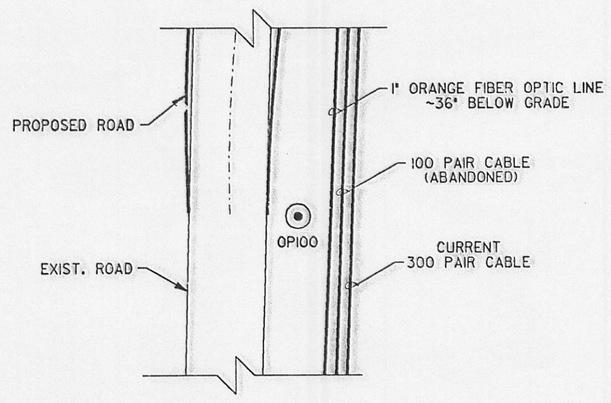
580
575
CB 130
FM-24"
E CONDUIT
ST-18"
580
575

Sketch # 20110-SK-010
From 92X-5900-G-00261
DCN 1700-026
Pg 3

949

0' 1/2" 1" 2" 3" 4" 5" 6"





DETAIL #1

OP100 480170.42, 1350900.80
OP101 480310.58, 1350933.94

NEW POLE COORDINATES

	EASTING	NORTHING
OP100	1350887.98	480170.67
OP101	1350921.93	480315.04
OP102	1350976.15	480450.70
OP103	1351073.25	480562.90
OP104	1351178.41	480668.07
OP105	1351283.60	480773.24
OP106	1351388.74	480878.40
OP107	1351493.90	480983.57
OP108	1351597.30	481090.35
OP109	1351727.00	481223.51
OP110	1351727.61	481357.35
OP111	1351729.17	481505.70
OP112	1351730.80	481654.40
OP113	1351732.50	481803.10
OP114	1351734.15	481951.82
OP115	1351735.83	482100.53
OP116	1351737.50	482249.25
OP117	1351739.20	482397.96
OP118	1351740.86	482546.68
OP119	1351742.54	482695.40
OP120	1351744.21	482844.11
OP121	1351745.90	482992.82
OP122	1351747.60	483141.54
OP123	1351749.25	483290.25
OP124	1351750.92	483438.97
OP125	1351752.60	483587.70
OP126	1351754.28	483736.40
OP127	1351755.96	483885.11
OP128	1351768.62	484032.70
OP129	1351840.50	484161.55
OP130	1351924.20	484284.50
OP131	1352007.93	484407.40
OP132	1352091.77	484530.20

LEGEND

- OSDF TELEPHONE FEEDER POLE (33)
- OSDF POWER DISTRIBUTION POLE

949

INFORMATION ONLY

CADD SERVICES

NOTES:

1. POLES OP100 THRU OP132 TO BE 45 FT., CLASS II, 100% TREATED SOUTHERN PINE SET 6'-6".
2. GUYS SHOWN ON POLES OP100, OP102, OP109, OP128 AND OP132 SHALL HAVE ANCHOR AND ROD ONLY INSTALLED FOR TELEPHONE COMPANY. SEE DWG. "90X-5500-E-00502 FOR ANCHOR AND ROD DETAILS.
3. BEFORE DIGGING NEAR UNDERGROUND TELEPHONE LINES CALL UTILITY HOT LINE (2) BUSINESS DAYS PRIOR TO DIGGING. (1-800-686-7826) POLES OP100, OP101, OP128, OP129, OP130, OP131 AND OP132 WILL REQUIRE THE TELEPHONE LINES BE IDENTIFIED.

949

FERMCO PROJECT NO. 20110

90X-5500-E-00502

NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
					90X-5500-E-00501
					90X-5500-E-00500
					22H-5500-P-00674
					22H-5500-P-00673
					22H-5500-P-00667
1	ADDED FERMCO PROJECT NO.	11/1/96	SJS	GEP	22A-5500-P-00664
0	CFC	10/1/96	SJS	GEP	22F-5500-P-00663

NOTE: FERMCO C.A.D. DRAWING NOT TO BE REVISED MANUALLY

CONFIGURATION MANAGEMENT DRAWING — YES X NO

SYSTEMS, STRUCTURES OR COMPONENTS DEPICTED ON THIS DRAWING ARE UNDER CONFIGURATION MANAGEMENT CONTROL. SEE NOTES.

R.C. WORSLEY 10/9/96
COGNIZANT ENGINEER DATE

APPROVALS

			SAFETY ENG.		
CIVIL & STR.			MAINTENANCE		
ELECTRICAL	J.C. JENKINS	10/8/96	O.A.		
ENGINEER	R.C. WORSLEY	10/9/96	FIRE PROTECT.		
INSTRUMENT			WASTE MANAGE		
MECHANICAL			SECURITY		
			CRU		
CHECKED	GEP		OSDF	J.C. JENKINS	10/9/96
APPROVED	G.E. PAUL	10/9/96			

FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION
FERMCO
Fernald
Environmental Management Project
U.S. DEPARTMENT OF ENERGY

NORTH ACCESS ROAD
OSDF UTILITY REROUTING - MAIN SITE TELEPHONE FEEDER LINES
LAYOUT
SCALE: 1" = 160'-0"

RES #3037
DATE 7/22/96
DRAWN S.J.SMOCK

90X-5500-E-00503 | 1

FORMAT REVISED 4/15/96 FORM5VA.DGN

DO NOT SCALE REDUCED DRAWING

241950-2

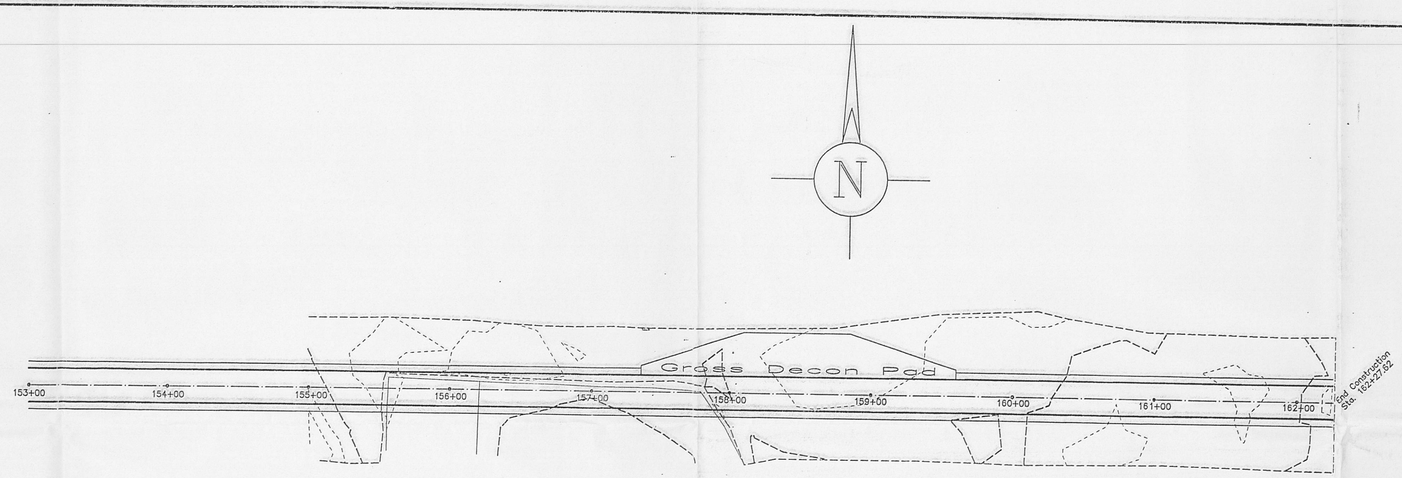
FILE NAME: /RES3037/90XE00503.DGN

R90xe0503.m(3318.ws15) steve@ws15. Thu Nov 7 14:50:41 EST 1996

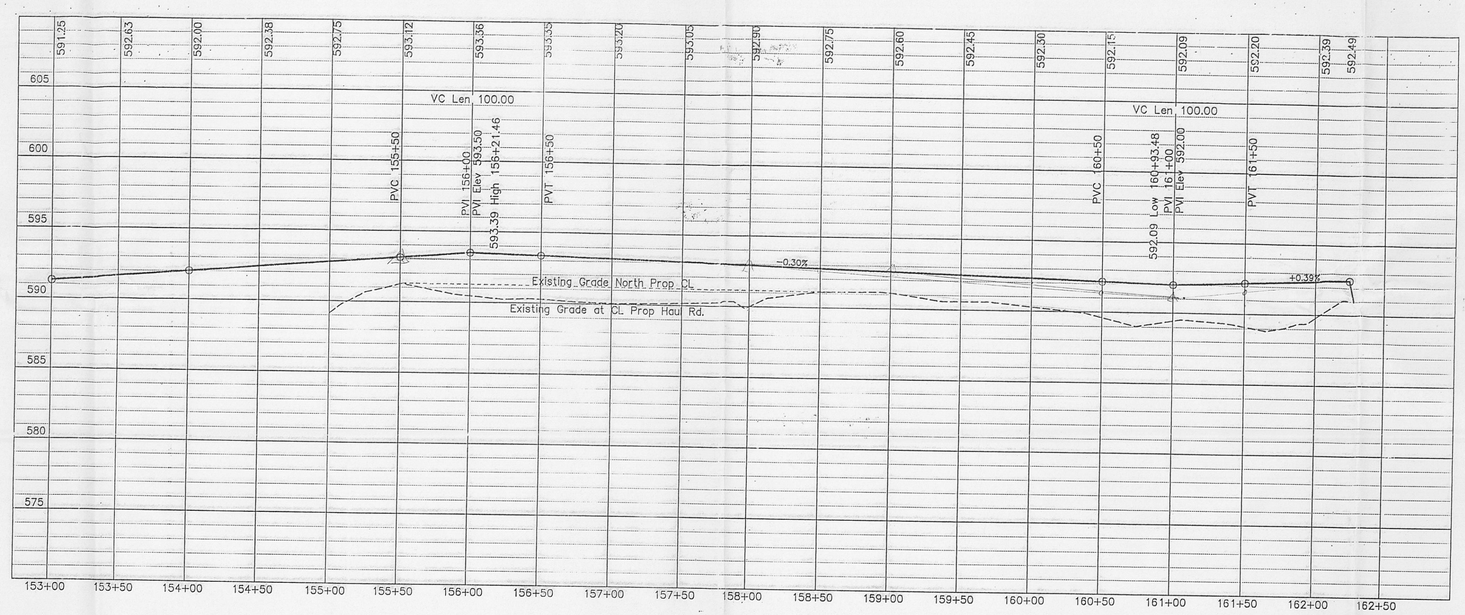
46.0 T NNP

949

000158



Scale 1" = 50'



Scale
Hor. 1" = 50'
Vert. 1" = 5'

Sketch # 20120-SK-012
OCN 1698/99-033

STATE OF OHIO
RONALD E. HULL
E-44041
REGISTERED
PROFESSIONAL ENGINEER

/jobs/FERMCO/haul/haulrdrev2.S80

REVISIONS	
DATE	DESCRIPTION

Plan and Profile 949
Revised Haul Road

B. L. Payne & Associates, Inc.
Civil Engineers & Surveyors
11479 Colerain Avenue
File: /jobs/FERMCO/haul/haulrdrev.S80
Cincinnati, Ohio 45241
Phone: (513) 563-5922

Date: 07/16/97 | File No. 2842 | Drawn By: BCP | Scale: As Shown

241950-3

STATE OF OHIO NORTH (NAD 83)

FEMP NORTH ∠=1.5672°

MATCH LINE

ST. 126+00
℄ DWG G00201

PT STA 123+24.95

SEE NOTE A
No. BUT PLACE 1 CHECK DAM NEAR OUTLET KG

℄ OMIT

OK TO OMIT KG

OK

OK

DO NOT PUT S.F ACROSS STREAM BED. USE A STONE CHECK DAM IN CHANNEL AND S.F ALONG CONTOUR KG

SEE NOTE A
No. KEEP CHECK DAM BUT MOVE CLOSER TO PIPE OUTLET KG

PT STA 120+22.54

PT STA 109+51.58

SEE NOTE A
No. KEEP CHECK DAM

* OMIT

NOTES

1. AS WORK PROGRESSES, ALL SLOPES STEEPER THAN 3:1 ON CUT OR EMBANKMENT AREAS THAT ARE CONSTRUCTED TO A HEIGHT OF FIVE FEET OR MORE SHALL BE SEEDED IMMEDIATELY. ALL FLATTER AREAS THAT DO NOT HAVE A COVER OF VEGETATION AND WHERE NO FURTHER WORK IS TO OCCUR FOR ONE MONTH OR MORE SHALL BE SEEDED AND MULCHED WITHIN SEVEN (7) CALENDAR DAYS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. ALL SLOPES WILL BE PERMANENTLY SEEDED AND MULCHED AS PER ODOT ITEM 659.
3. THE SUBCONTRACTER WILL BE REQUIRED TO PLACE EROSION CONTROL MEASURES AS DIRECTED BY FERMCO. THE TYPE AND LOCATION, AS SHOWN ON THIS PLAN IS SUBJECT TO REVISION BY FERMCO FIELD CONDITIONS.
4. SEE DRAWING 92X-5900-G-00205 FOR DETAILS OF SEDIMENT CONTROL MEASURES TO BE INSTALLED.

CDC CONTROLLED COPY NO: 436 1
~~CONTROLLED COPY NO:~~ 436

LEGEND

- DRAINAGE FLOW
- SILT FENCE
- STRAW OR HAY BALES
- DITCH CHECKS
- TEXT — DCN COMMENTS

NOTE A.

Place stone check dam near pipe outlet / limit of clearing. Silt fence should not be used at the outlet side of a culvert. KG.

THIS DOCUMENT IS AFFECTED BY THE FOLLOWING:
DCN - 1699/99-01

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-X-00179	LEGEND AND SYMBOLS
92X-5900-G-00184	TYPICAL SECTIONS
92X-5900-G-00201	TEMPORARY EROSION CONTROL - SHEET 2 OF 2
92X-5900-G-00205	GENERAL DETAILS - SHEET 2 OF 2

CDC CONTROLLED CERTIFIED

CONTROLLED COPY NO. 002 1

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E	FERMCO	DATE
			INITIALS AND DATE	
Ø	CERTIFIED FOR CONSTRUCTION	JMW	N/A	7/25/96

UNITED STATES
DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
HAUL ROAD CONSTRUCTION

DRAWING TITLE
CIVIL
TEMPORARY EROSION CONTROL
SHEET 1 OF 2

08 15 96 1688 000317

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/23/96	A. CHRISTO	12/18/95

PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	N/A DATE	20410

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/PO158	WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00200	G0017	Ø

Part of X-drawing 2020-SK-003 R/0

949

FEMP NORTH

STATE OF OHIO NORTH (NAD 83) 1.5672°

CONTINUED ON 94X-5900-E-00938

13.2KV, EVAC

B E00966

POLE *P5 E4 E00952

13.2KV, EVAC

LOCATE FS90 AND TELEPHONE BACKBOARD IN DUPLEX TRAILER #1. LOCATION BY OTHERS

DUPLEX TRAILER #1

TOILETS

480V, EVAC, FA

480V, EVAC, FA

DUPLEX TRAILER #2

13.2KV

POLE *P7 E7 E00952 H MS EAH

E8 E00953

480V, EVAC, FA

POLE *P8

13.2KV, 480V, 120V, LTG, EVAC, FA

TRAILER T-97

13.2KV, LTG, EVAC, FA

E12 E00953 TYPICAL FOR ALL TRAILER DROPS

SUBCONTRACTOR #3

POLE *P9 E9 E00953

120V, EVAC, FA

480V, EVAC, FA

POLE *P10

E11 E00953

SUBCONTRACTOR #1

SPACE ALLOWED FOR TELEPHONE CABLE, CABLE AND ROUTING BY OTHERS.

13.2KV, 120V, LTG

POLE *P17

E16 E00966

480V, LTG

13.2KV, LTG, EVAC, FA

CONTINUED ON 94X-5900-E-00938

120V, LTG

NEMA 3R ENCLOSURE FOR LIGHTING CONTROLS

SUBCONTRACTOR #2

POLE *P13 E10 E00953

TRAILER T-98

DETAIL 1 REF E00718

Mark-up per A. Bazzoni on DCN ??

MRB 5-19-97

INFORMATION ONLY

CADD SERVICES

NOTES

1. SEE DRAWING 94X-5900-X-00926 FOR DRAWING INDEX.
2. SEE DRAWING 94X-5900-E-00954 FOR SINGLE LINE DIAGRAM OF 480V AC POWER DISTRIBUTION TO TRAILERS.
3. SEE DRAWING 94X-5900-E-00949 FOR FIRE ALARM AND EVACUATION ALARM SYSTEM WIRING.
4. SEE DRAWINGS 94X-5900-E-00952, E-00953, AND E-00966 FOR POWER POLE DETAILS

LEGEND

- H • — FIRE ALARM HORN (• = SUITABLE FOR OUTDOOR LOCATION)
- MS • — FIRE ALARM MANUAL PULL STATION (• = SUITABLE FOR OUTDOOR LOCATION)
- EAH • — EVACUATION SPEAKER (• = SUITABLE FOR OUTDOOR LOCATION)
- ——— OVERHEAD ELECTRICAL POWER/COMUNICATION LINE(S) (EVAC = EVACUATION ALARM, FA = FIRE ALARM, LTG = 120V LIGHTING CIRCUIT) SEE POWER POLE DETAILS FOR QUANTITY
- ○ ¾" D X 10' GROUND ROD
- T• — SINGLE PHASE POLE MOUNTED TRANSFORMER • = TOTAL NUMBER AT LOCATION
- 120V POLE MOUNTED LIGHT
- ■ WEATHERHEAD

REF DWG NO.	DRAWING TITLE
94X-5900-X-00926	DRAWING INDEX
94X-5900-E-00938	SITE PLAN
94X-5900-E-00949	FIRE AND EVACUATION ALARM RISER DIAGRAM
94X-5900-E-00952	POWER POLE DETAILS - SHEET 1 OF 3
94X-5900-E-00953	POWER POLE DETAILS - SHEET 2 OF 3
94X-5900-E-00954	SINGLE LINE DIAGRAM
94X-5900-E-00966	POWER POLE DETAILS - SHEET 3 OF 3

REV NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS AND DATE	FERMCO INITIALS AND DATE
4	REVISED TO INCORPORATE FERMCO DCN NO. CONS\1688:019; DELETED 300KVA TRANSFORMER BANK FROM POLE *P10, DELETED DISCONNECT SWITCHES AND ASSOCIATED EQUIPMENT FROM POLES *P8, *P9, & *P10, DELETED NOTE 6. GENERAL REVISION TO DRAWING TO CLARIFY DESIGN, DELETED NOTE 2.	MRR FOR APP	N/A 12/20/96
3	REVISED TO INCORPORATE FERMCO DCN NO. CONS\1688:009, MOVED T-97 AND T-98 FEEDERS, ADDED POLE P17 AND LIGHTING.	MRR FOR APP	N/A 05/23/96
2	REVISED TO INCORPORATE FERMCO DCN NO. CONS\1688:002. REV. 0 AND FERMCO RFP, REV. 1. DELETED PANELBOARD AND ADDED POLE MOUNTED TRANSFORMERS.	MRR	N/A 03/05/96
1	ADDED TRAILER T98, TETEPHONE CABLES, AND DELETED 'F', 'E', AND 'A' CABLE ROUTING.	APP	N/A 12/15/95
0	APPROVED FOR CONSTRUCTION	APP	N/A 11/21/95

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME
SITE PREPARATION / UNDERGROUND UTILITIES
FERNALD RESIDUES VITRIFICATION PLANT

DRAWING TITLE
ELECTRICAL SITE PLAN TRAILER AREA

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
R. PROSKI	11/03/95	T. FERRELL	11/15/95	J. L. COOPER	11/15/95

PLANT/BLDG NO.	FLOOR	SCALE	CLASS
		1" = 10'-0"	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	
A. P. PYRZ 11/21/95	N/A	N/A

A-E PROJECT NO.	DATE	FERMCO PROJECT NO.	DRAWING SHEET CODE NO.	SHEET NO.	REV NO.
		25 1.1.1.1.4.3 00 20701	94X-5900-E-00949		

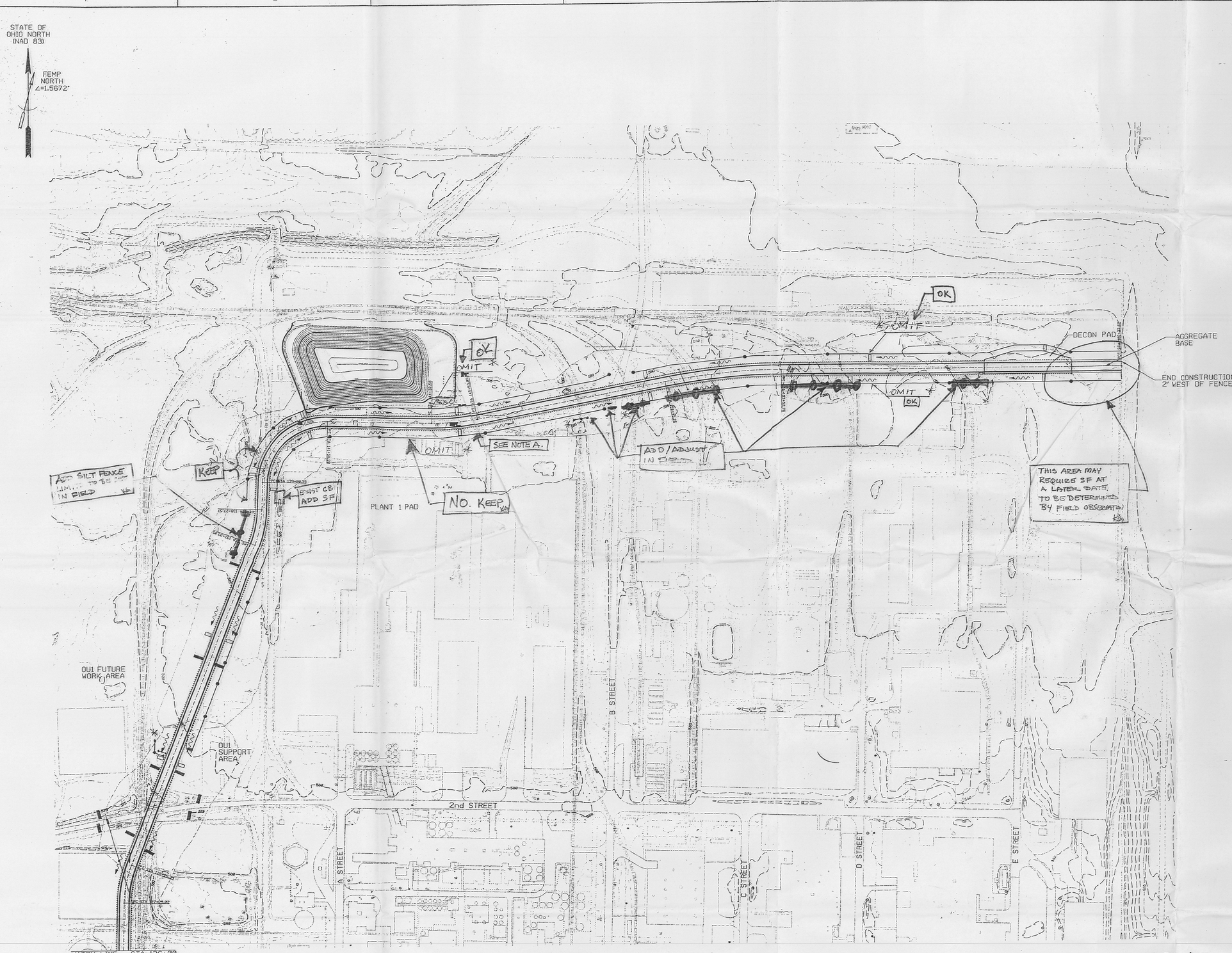
000295

DCN 1688:009

241950-5

P3 of 3

DO NOT SCALE REDUCED DRAWINGS



NOTES

1. AS WORK PROGRESSES, ALL SLOPES STEEPER THAN 3:1 ON CUT OR EMBANKMENT AREAS THAT ARE CONSTRUCTED TO A HEIGHT OF FIVE FEET OR MORE SHALL BE SEEDED IMMEDIATELY. ALL FLATTER AREAS THAT DO NOT HAVE A COVER OF VEGETATION AND WHERE NO FURTHER WORK IS TO OCCUR FOR ONE MONTH OR MORE SHALL BE SEEDED AND MULCHED WITHIN SEVEN (7) CALENDAR DAYS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. ALL SLOPES WILL BE PERMANENTLY SEEDED AND MULCHED AS PER ODOT ITEM 659.
3. THE SUBCONTRACTER WILL BE REQUIRED TO PLACE EROSION CONTROL MEASURES AS DIRECTED BY FERMCO. THE TYPE AND LOCATION, AS SHOWN ON THIS PLAN IS SUBJECT TO REVISION BY FERMCO FIELD CONDITIONS.
4. SEDIMENT CONTROL MEASURES TO BE INSTALLED AS SHOWN ON DRAWING 92X-5900-G-00205.
5. HAY OR STRAW BALES WILL BE PLACED AROUND NEW AND EXISTING CATCH BASINS, WITHIN 50' OF ROAD CENTERLINE, AS SHOWN ON DRAWING 92X-5900-G-00205.

EDC CONTROLLED COPY NO. 943 6436

LEGEND

- DRAINAGE FLOW
- SILT FENCE
- STRAW OR HAY BALES
- DITCH CHECKS
- SILT FENCE PER DCN
- TEXT — DCN COMMENTS

NOTE A
DO NOT BLOCK GRAVEL ROAD WITH SILT FENCE. MAKE A 6" DIVERSION BERM USING / REGRADING EXISTING GRAVEL. DRAIN TO WEST. KS

NOTE B KS
ADDITIONAL SILT FENCE MAY BE ADDED TO PREVENT SEDIMENT FROM LEAVING THE HAUL ROAD WORK ZONE. LOCATION WILL BE DETERMINED BY FIELD OBSERVATION BY FDF.

THIS DOCUMENT IS AFFECTED BY THE FOLLOWING:
DCN. 1698/99-01

REF DWG NO.	DRAWING TITLE
92X-5900-X-00178	DRAWING INDEX
92X-5900-G-00179	LEGEND AND SYMBOLS
92X-5900-G-00200	TEMPORARY EROSION CONTROL - SHEET 1 OF 2
92X-5900-G-00205	GENERAL DETAILS - SHEET 2 OF 2

EDC CONTROLLED CERTIFIED

CONTROLLED COPY NO. 002

REV. NO.	ISSUE OR REVISION PURPOSE - DESCRIPTION	A-E INITIALS	FERMCO INITIALS	DATE
Ø	CERTIFIED FOR CONSTRUCTION	JMW	N/A	7/25/96

UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

THIS DRAWING PREPARED BY
PARSONS
THE RALPH M. PARSONS CO. - PARSONS MAIN, INC. - ENGINEERING-SCIENCE, INC.
CINCINNATI, OHIO

PROJECT NAME: HAUL ROAD CONSTRUCTION 949

08 15 96 1688

DRAWING TITLE: CIVIL
TEMPORARY EROSION CONTROL
SHEET 2 OF 2

DRAWN BY	DATE	LEAD ENGINEER	DATE	CHECKED BY	DATE
M. BESS	12/18/95		7/25/96	A. CHRISTO	12/18/95

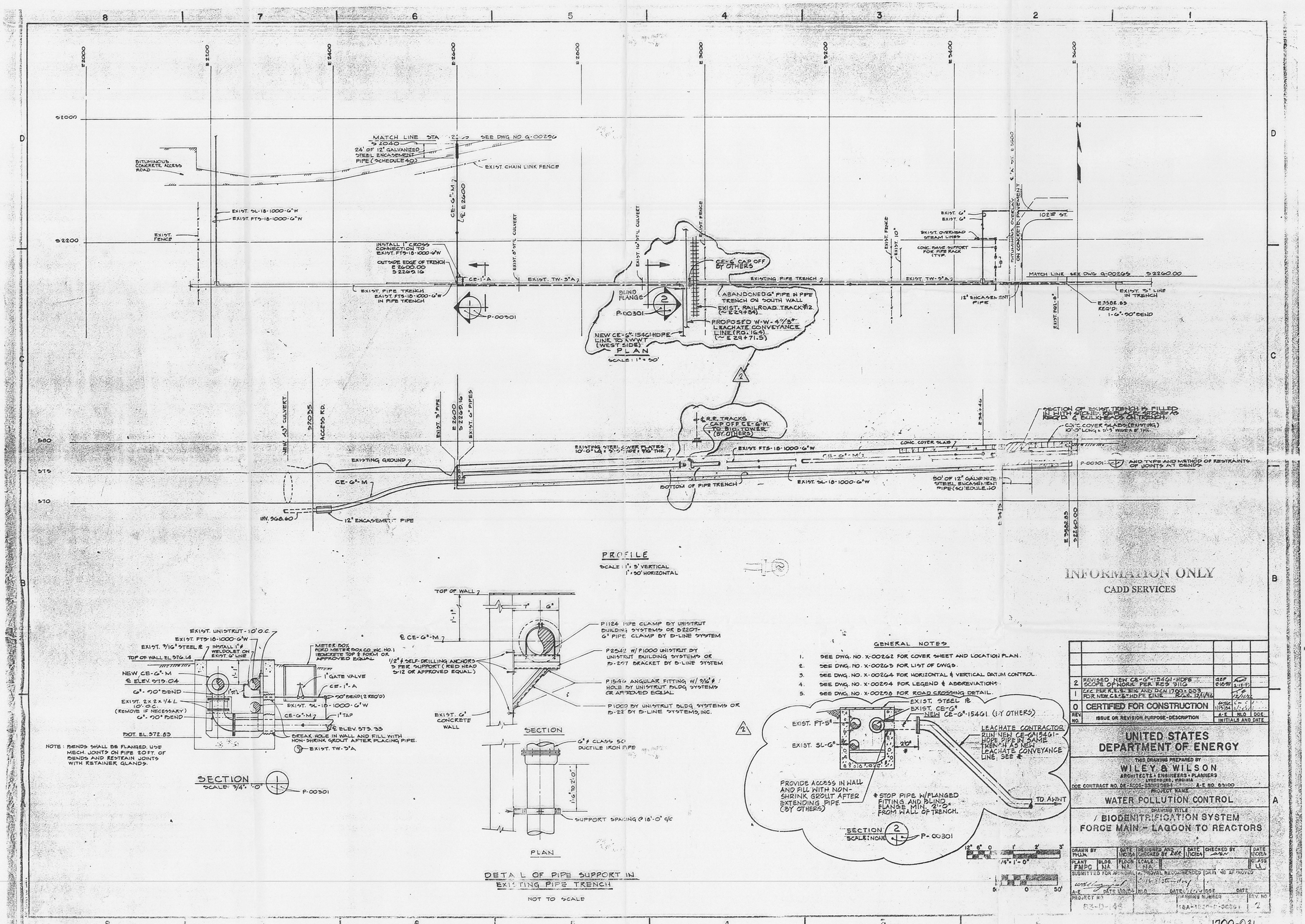
PLANT/BLDG. NO.	FLOOR	SCALE	CLASS
		NONE	

SUBMITTED FOR APPROVAL	FERMCO CRU APPROVAL	FERMCO PROJECT NUMBER
A-E DATE 7/25/96	DATE N/A	20410

STATE OF OHIO JAMES M. WILEY E-040373 REGISTERED PROFESSIONAL ENGINEER

PREPARED UNDER PARSONS PROJECT ORDER NUMBER	DOE PROJECT NO.	FEMP PROJECT NO.	DRAWING INDEX CODE NO.	SHEET NO.	REV. NO.
OU2/P0158		WBS 1.1.1.1.2.3.6 00-90701	92X-5900-G-00201	G0018	Ø

Page 3-7 DCN - 1698/99-014 20120-SK-004 R/0
241950-6



REV NO	ISSUE OR REVISION PURPOSE-DESCRIPTION	A-E INITIALS	NLO INITIALS	DOE INITIALS AND DATE
2	REVISED NEW CE-G"-154G1-HDPE SCOPE OF WORK PER RES 916	GBF 2-10-97	RJ 2-11-97	
1	CEC PER R.E.S. 816 AND DCN 1700-003 FOR NEW CE-6"HDPE LINE R.with 12/4/96		CS 12/11/96	
0	CERTIFIED FOR CONSTRUCTION		CS 11/5/96	CS 11/5/96

UNITED STATES DEPARTMENT OF ENERGY

THIS DRAWING PREPARED BY
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ARCHITECTS + ENGINEERS + PLANNERS
LYNCHBURG, VIRGINIA

DOE CONTRACT NO. DE-AC05-83OR21654 A-E NO. 83100

PROJECT NAME
WATER POLLUTION CONTROL

DRAWING TITLE
BIODENITRIFICATION SYSTEM
FORCE MAIN - LAGOON TO REACTORS

DRAWN BY	DATE	DESIGNED AND CHECKED BY	DATE	CHECKED BY	DATE
PMJA	11/95A	RAK	11/95A		

PLANT	BLDG.	FLOOR	SCALE	CLASS
FMPC	NA	NA	1"=NA	U

SUBMITTED FOR APPROVAL: A-E DATE 11/95A; NLO; DOE DATE
FINAL RECOMMENDED; DRAWING APPROVED DATE

PROJECT NO. 8X-10-46 DRAWING NUMBER 16A-1700-F-00301 REV. NO. 2

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