

CONTRACT SPECIFICATIONS

THE JANUARY 1, 2016 VERSION OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AS PUBLISHED BY THE OHIO DEPARTMENT OF TRANSPORTATION SHALL GOVERN ALL ASPECTS OF THE CONTRACT WORK. THE CONTRACTOR SHOULD BE FAMILIAR WITH THESE SPECIFICATIONS AND THEIR PROCEDURAL REQUIREMENTS.

STANDARD DRAWINGS

REFERENCE SHOULD BE MADE TO THE STANDARD DRAWINGS SHOWN IN THE TABLE ON THE COVER SHEET.

O.U.P.S CALL:

THE CONTRACTOR IS RESPONSIBLE FOR CALLING THE OHIO UTILITIES PROTECTION SERVICE AT LEAST TWO DAYS BEFORE DIGGING. THE TOLL-FREE NUMBER IS (800) 362-2764.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

GAS ASPIRE ENERGY
300 TRACY BRIDGE RD
ORRVILLE, OHIO 44667
CONTACT: TONY KOVACEVICH
PHONE: 330-682-4145

TELEPHONE FRONTIER COMMUNICATIONS
754 WEST UNION ST
ATHENS, OHIO 45701
CONTACT: STEVEN KISLING
PHONE: 740-592-0544

ELECTRIC AMERICAN ELECTRIC POWER
9135 SR 682
ATHENS, OHIO 45701
PHONE: 740-594-1911

WATER SUNDAY CREEK VALLEY WATER
15945 SECOND ST
MILLFIELD, OHIO 45761
PHONE: 740-797-2566

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNER OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

UTILITY LINES

ALL EXPENSES INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY(IES). THE CONTRACTOR AND UTILITY ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

WORK LIMITS

ALL PHYSICAL WORK SHALL BE COMPLETED WITHIN THE COUNTY RIGHT-OF-WAY ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

ELEVATION DATUM

ALL ELEVATIONS ARE ORTHOMETRIC HEIGHTS USING THE NORTH AMERICAN VERTICAL DATUM OF 1988(NAVD 88) AND THE GEOID 12A. HORIZONTAL POSITIONS ARE BASED ON THE OHIO STATE PLANE SOUTH ZONE 3402.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

ROAD CLOSED/MAINTENANCE OF TRAFFIC

THE COUNTY ROAD WILL BE CLOSED FOR A MAXIMUM OF 45 DAYS. LOCAL TRAFFIC WILL BE DETOURED.

ITEM 614 - MAINTAINING TRAFFIC

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48" X 30" - "ROAD CLOSED" SIGNS, SIGN SUPPORTS, BARRICADES, GATES, AND LIGHTS, AS DETAILED IN STANDARD CONSTRUCTION DRAWING MT-101.60 AT LOCATIONS NEAR THE SLIPS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC.

THE ATHENS COUNTY ENGINEER WILL PROVIDE THE SIGNS FOR THE DETOUR ROUTE, AND WILL MAINTAIN THE DETOUR SIGNS.

ITEM 659 - SEEDING AND MULCHING

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE EASEMENT LINES. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

ITEM 201 - CLEARING AND GRUBBING

CONTRACTORS SHOULD INSPECT THE AREAS WHERE THE RETAINING WALLS ARE TO BE CONSTRUCTED TO FIND THE BULK OF THIS WORK. SPECIFIC TREES TO BE REMOVED HAVE NOT BEEN DENOTED ON THESE DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE SCOPE OF WORK REQUIRED TO CLEAR THE AREAS NEEDED TO CONSTRUCT THE VARIOUS ELEMENTS OF THIS PROJECT.

ITEM 203 - SPECIAL - EARTHWORK

PAYMENT FOR RECONSTRUCTION OF GRADED SHOULDER SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM SPECIAL-EARTHWORK (203).

ITEM 507 - STEEL PILES, MISC.: SOLDIER PILES HP12x53

THIS WORK CONSISTS OF FURNISHING AND PLACING STEEL SOLIDER PILES INTO DRILLED HOLES. FURNISH SOLDIER PILES CONSISTING OF STRUCTURAL STEEL MEMBER THAT MEET THE PLAN REQUIREMENTS AND CONFORM TO ASTM A572, GARDE 50. DO NOT FIELD WELD OR SPLICE SOLDIER PILES; WITH PANEL SEATS BEING THE EXCEPTION.

MEASUREMENT FOR PAYMENT WILL BE LIMITED TO THE DISTANCE BETWEEN THE TOP OF WALL ELEVATION AND THE BOTTOM OF THE DRILLED SHAFT, AS DETERMINED BY THE ENGINEER. THE DEPARTMENT WILL PAY FOR SOLDIER PILES AT THE CONTRACT UNIT PRICE PER FOOT OF ITEM 507 - STEEL PILES, MISC.: SOLDIER PILES - HP12x53.

ITEM 524 - DRILLED SHAFTS, 30" DIAMETER, PLUG PILES, AS PER PLAN

THESE SHAFTS ARE TO BE UN-REINFORCED NON-STRUCTURAL "PLUG PILES".

THIS WORK SHALL BE PER ITEM 524 EXCEPT REINFORCING WILL NOT BE USED IN THE SHAFT. EACH PLUG PILE SHALL BE CENTERED BETWEEN EACH REINFORCED 24" DIAMETER DRILLED SHAFT AND DRILLED TO THE TOP OF ROCK PER THE PLUG PILE DRILLED SHAFT SUMMARY ON SHEET 4 AND DETAILS ON SHEET 4, AND BACKFILLED WITH UN-REINFORCED CLASS QC1 CONCRETE.

SEQUENCE OF INSTALLATION

THE INSTALLATION SEQUENCE SHALL BE SUCH THAT NO DRILLED SHAFT IS INSTALLED ADJACENT TO EITHER AN OPEN DRILLED SHAFT EXCAVATION OR A DRILLED SHAFT IN WHICH THE CONCRETE HAS LESS THAN A 48 HOUR CURE. INSTALLING THE SHAFTS IN A ALTERNATING SEQUENCE OR ANY OTHER SEQUENCE THAT MEETS THIS CRITERIA IS PERMISSIBLE.

PROTECTION OF UNATTENDED OPEN SHAFTS CARE SHALL BE EXERCISED AS TO COVER UNATTENDED OPEN SHAFTS. TEMPORARY COVERS SHALL BE OF ADEQUATE STRENGTH TO PREVENT A PERSON OR ANIMAL FROM FALLING IN. NO DRILLED SHAFT EXCAVATION SHALL BE LEFT UN-POURED OVERNIGHT

ACCESS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS USED TO CONSTRUCT THE DRILLED SHAFTS. ANY TEMPORARY GRADING, AGGREGATE, DRAINAGE, SHEETING ETC. NEEDED FOR ACCESS TO THE WORK AREA SHALL BE INCLUDED IN THE BID PRICE FOR THE DRILLED SHAFTS. THE COST OF ANY EXCAVATION AND SUBSEQUENT REPLACEMENT OF EMBANKMENT (PER ITEM 203 EMBANKMENT) SHALL BE INCLUDED IN THE VARIOUS BID ITEMS FOR THE DRILLED SHAFT AND NO SEPARATE PAYMENT WILL BE MADE. PAYMENT IS FULL COMPENSATION FOR CONSTRUCTING THE DRILLED SHAFTS, INCLUDING FURNISHING AND PLACING CONCRETE AND ANY SONOTUBE REQUIRED FOR FORMING THE TOPS OF THE SHAFTS. PAYMENT FOR SOIL OVERBURDEN DRILLING, WHICH IS GROUND LEVEL TO THE TOP OF THE SHAFT, SHALL BE INCLUSIVE OF ITEM 524 DRILLED SHAFTS, 30" DIAMETER, PLUG PILES, AS PER PLAN.

MEASUREMENT FOR PAYMENT FOR DRILLED SHAFTS, AS PER PLAN, WILL BE MEASURED ALONG THE AXIS OF THE DRILLED SHAFT FROM THE TOP OF THE SHAFT TO THE BOTTOM OF THE SHAFT, AS DETERMINED BY THE ENGINEER.

ITEM 524 - DRILLED SHAFTS, 24" DIAMETER, KING PILES, AS PER PLAN

THIS WORK CONSISTS OF FURNISHING AND INSTALLING DRILLED SHAFTS FOR SOLDIER PILE AND LAGGING WALLS. THE DRILLED SHAFTS ARE REINFORCED WITH SOLDIER PILES INSTEAD OF REINFORCING STEEL CAGES. THE SOLDIER PILES EXTEND ABOVE THE TOP OF THE DRILLED SHAFT. FURNISH AND INSTALL DRILLED SHAFTS IN ACCORDANCE WITH CMS 524 EXCEPT AS MODIFIED AND SUPPLEMENTED BELOW.

EXCAVATE THE HOLE FOR THE DRILLED SHAFTS WITHIN 3 INCHES OF THE PLAN LOCATION IN THE HORIZONTAL PLANE. IF FIELD CONDITIONS INDICATE GREATER DEPTHS, NOTIFY THE ENGINEER FOR FURTHER EVALUATION.

PLACE THE SOLDIER PILE VERTICALLY WITHIN THE HOLE SO IT IS NOT INCLINED MORE THAN 1" BETWEEN THE TOP AND BOTTOM. PLACE THE SOLDIER PILE SO THAT THE FLANGES ARE PARALLEL TO THE CENTERLINE OF CONSTRUCTION. DO NOT ALLOW THE ORIENTATION OF THE FLANGES TO VARY BY MORE THAN 10 DEGREES. SUPPORT THE SOLDIER PILE SO THAT IT DOES NOT MOVE CONCRETE PLACEMENT.

USE CLASS QC1 CONCRETE ACCORDING TO CMS 511. PLACE CONCRETE TO THE ELEVATION FOR THE BOTTOM OF THE PRECAST LAGGING. THE CONTRACTOR MAY PLACE CONCRETE USING THE FREE FALL METHOD PROVIDED THE DEPTH OF WATER IS LESS THAN 6 INCHES AND THE CONCRETE FALLS WITHOUT STRIKING THE SIDES OF THE HOLE. POURING CONCRETE ALONG THE WEB OF THE SOLDIER PILE IS ACCEPTABLE.

CHECK THE POSITION, THE VERTICAL ALIGNMENT AND ORIENTATION OF THE SOLDIER PILE IMMEDIATELY AFTER CONCRETE PLACEMENT. MAKE CORRECTIONS AS NECESSARY TO MEET THE ABOVE TOLERANCES.

PLACE PRECAST LAGGING SO THAT THE SOLDIER PILE FLANGE OVERLAPS THE END OF THE LAGGING BY AT LEAST 3 INCHES AT BOTH ENDS OF THE LAGGING.

SEQUENCE OF INSTALLATION

THE INSTALLATION SEQUENCE SHALL BE SUCH THAT NO DRILLED SHAFT IS INSTALLED ADJACENT TO EITHER AN OPEN DRILLED SHAFT EXCAVATION OR A DRILLED SHAFT IN WHICH THE CONCRETE HAS LESS THAN A 48 HOUR CURE. INSTALLING THE SHAFTS IN A ALTERNATING SEQUENCE OR ANY OTHER SEQUENCE THAT MEETS THIS CRITERIA IS PERMISSIBLE.

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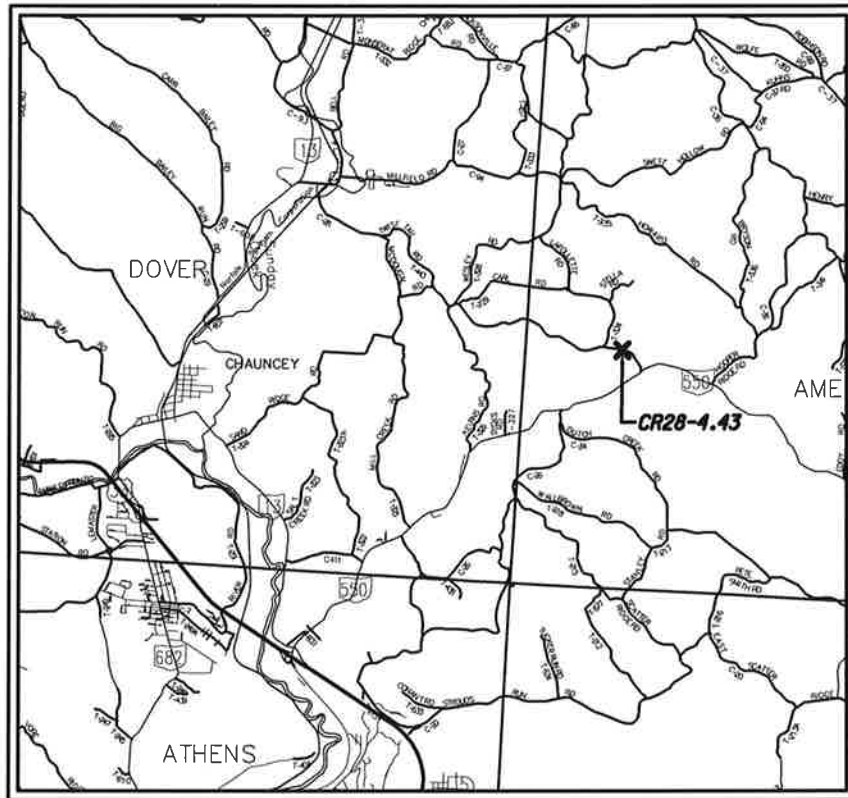
ACCESS

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MEASUREMENT FOR PAYMENT FOR DRILLED SHAFTS, AS PER PLAN, WILL BE MEASURED ALONG THE AXIS OF THE DRILLED SHAFT FROM THE TOP OF THE SHAFT TO THE BOTTOM OF THE SHAFT, AS DETERMINED BY THE ENGINEER.

GENERAL SUMMARY

REF NO.	ITEM NO.	ITEM DESCRIPTION	QTY	UNIT
1	201	CLEARING AND GRUBBING	1	LS
2	203	SPECIAL - EARTHWORK	1	LS
3	617	COMPACTED AGGREGATE	5	CY
4	507	STEEL PILES, MISC.:SOLDIER PILE HP12x53	810	FT
5	524	DRILLED SHAFTS, 30" DIAMETER, PLUG PILES, AS PER PLAN	260	FT
6	524	DRILLED SHAFTS, 24" DIAMETER, KING PILES, AS PER PLAN	817	FT
7	659	SEEDING AND MULCHING, AS PER PLAN	150	SY
8	614	MAINTAINING TRAFFIC	1	LS
9	623	CONSTRUCTION LAYOUT STAKES AND SURVEYING	1	LS
10	624	MOBILIZATION	1	LS
11	103	PREMIUM FOR PERFORMANCE BOND AND FOR PAYMENT BOND	1	LS



LOCATION MAP

LATITUDE: N39°24'24" LONGITUDE: W82°02'29"

SCALE IN MILES



2016 SPECIFICATIONS

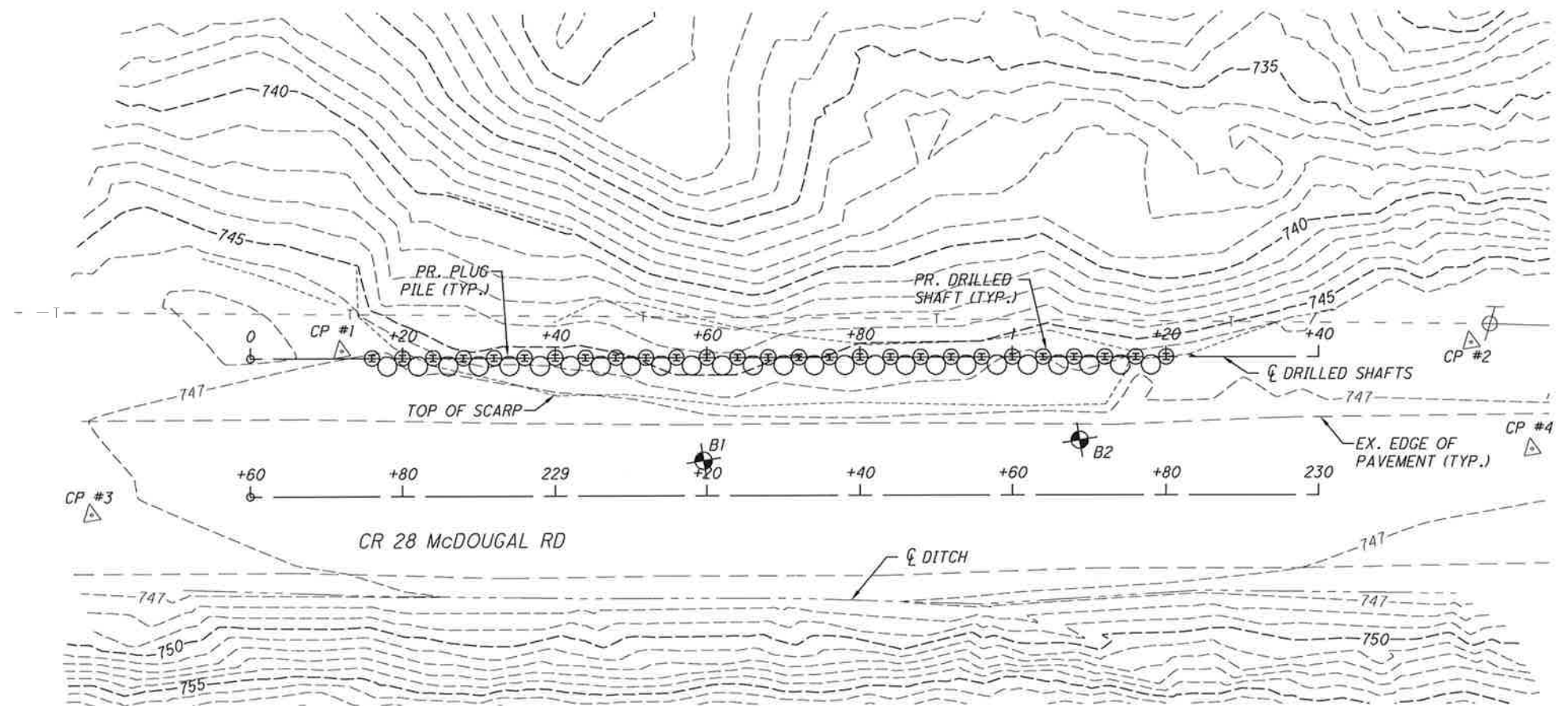
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

NOTES

- THE ROAD WILL BE CLOSED DURING CONSTRUCTION SO THE CONTRACTOR SHALL SETUP AND MAINTAIN ROAD CLOSURE TRAFFIC CONTROL THROUGHOUT CONSTRUCTION

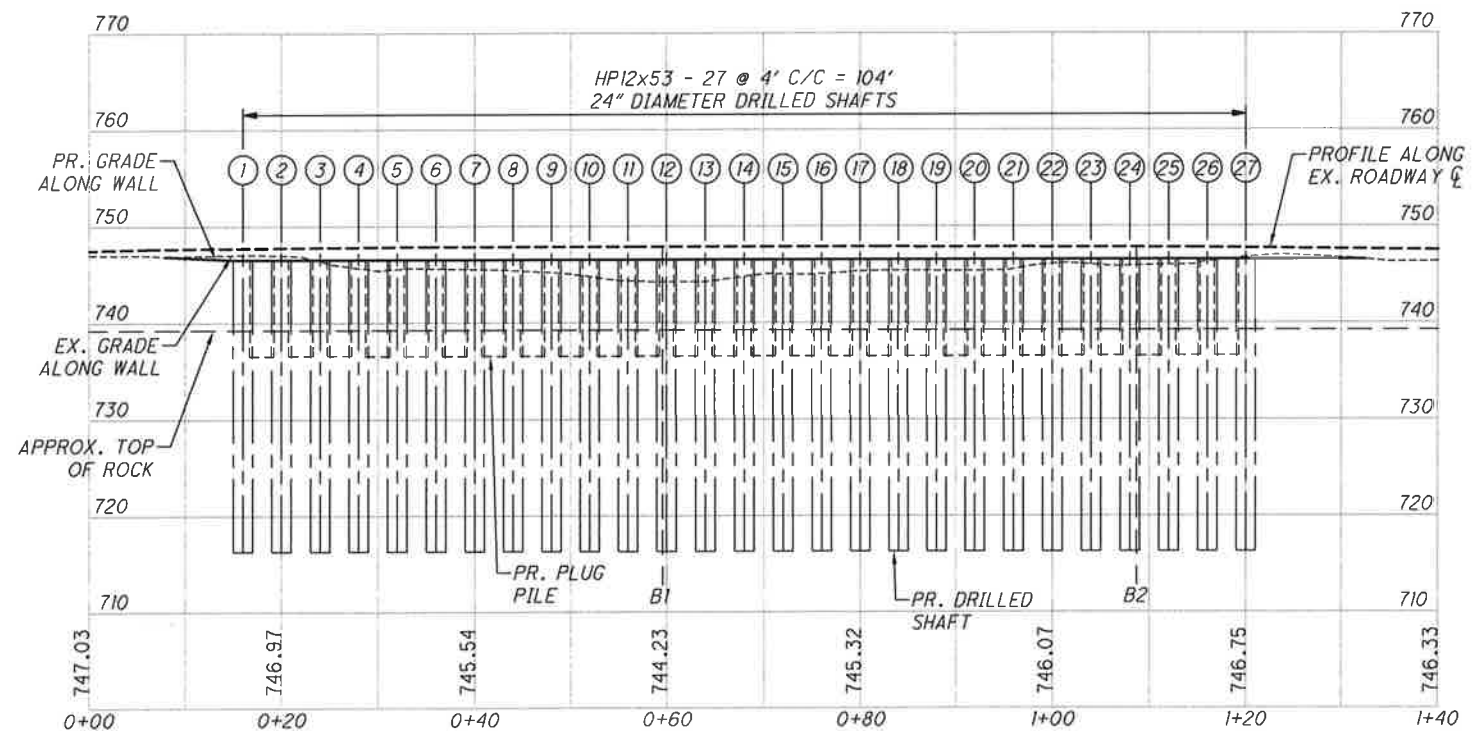
CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP #1	512760.052	2097666.327	746.94	HUB
CP #2	512735.682	2097812.067	746.70	HUB
CP #3	512744.765	2097812.067	746.69	PK NAIL
CP #4	512720.586	2097817.626	747.24	PK NAIL

SOIL BORINGS				
BORING	STATION	OFFSET	EX. GROUND SURFACE ELEV.	APPROX. TOP OF ROCK
B1	0+59.6	13.5' Rt	747.8	739.3
B2	1+08.7	10.8' Rt	747.7	739.2



SITE PLAN

- LEGEND**
- BORING LOCATION
 - CONTROL POINT



PIER WALL PROFILE



HORIZONTAL SCALE IN FEET

CALCULATED DES CHECKED R.J.M.

RETAINING WALL PLAN AND PROFILE

ATH-CR28-4.43 LANDSLIDE REPAIRS

DRILLED SHAFT SUMMARY (PLUG PILE)						
SHAFT NO.	C.L. DRILLED SHAFT STATION	C.L. CR28 STATION	C.L. CR28 OFFSET	BOTTOM ELEV. OF SHAFT	TOP ELEV. OF SHAFT	ITEM 524 DRILLED SHAFTS, 30" DIA. PLUG PILES, APP (FT)
1	00+18	228+82.00	16.97' Lt	736.53	746.53	10.00
2	00+22	228+86.00	16.97' Lt	736.53	746.53	10.00
3	00+26	228+90.00	16.97' Lt	736.53	746.53	10.00
4	00+30	228+94.00	16.97' Lt	736.53	746.53	10.00
5	00+34	228+98.00	16.97' Lt	736.53	746.53	10.00
6	00+38	229+02.00	16.97' Lt	736.53	746.53	10.00
7	00+42	229+06.00	16.97' Lt	736.53	746.53	10.00
8	00+46	229+10.00	16.97' Lt	736.53	746.53	10.00
9	00+50	229+14.00	16.97' Lt	736.53	746.53	10.00
10	00+54	229+18.00	16.97' Lt	736.53	746.53	10.00
11	00+58	229+22.00	16.97' Lt	736.53	746.53	10.00
12	00+62	229+26.00	16.97' Lt	736.53	746.53	10.00
13	00+66	229+30.00	16.97' Lt	736.53	746.53	10.00
14	00+70	229+34.00	16.97' Lt	736.53	746.53	10.00
15	00+74	229+38.00	16.97' Lt	736.53	746.53	10.00
16	00+78	229+42.00	16.97' Lt	736.53	746.53	10.00
17	00+82	229+46.00	16.97' Lt	736.53	746.53	10.00
18	00+86	229+50.00	16.97' Lt	736.53	746.53	10.00
19	00+90	229+54.00	16.97' Lt	736.53	746.53	10.00
20	00+94	229+58.00	16.97' Lt	736.53	746.53	10.00
21	00+98	229+62.00	16.97' Lt	736.53	746.53	10.00
22	01+02	229+66.00	16.97' Lt	736.53	746.53	10.00
23	01+06	229+70.00	16.97' Lt	736.53	746.53	10.00
24	01+10	229+74.00	16.97' Lt	736.53	746.53	10.00
25	01+14	229+78.00	16.97' Lt	736.53	746.53	10.00
26	01+18	229+82.00	16.97' Lt	736.53	746.53	10.00
TOTALS CARRIED TO GENERAL SUMMARY						260

DRILLED SHAFT SUMMARY (KING PILE)									
SHAFT NO.	C.L. DRILLED SHAFT STATION	C.L. CR28 STATION	C.L. CR28 OFFSET	BOTTOM ELEV. OF SHAFT	TOP ELEV. OF SHAFT	ESTIMATED TOP OF ROCK ELEVATION	ITEM 524 DRILLED SHAFTS, 24" DIA. KING PILES, APP (FT)	ITEM 507 STEEL PILES, MISC.: SOLDIER PILES HP12x53 (FT)	BEAM ORDER LENGTH HP12x53 (FT)
1	00+16	228+80.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
2	00+20	228+84.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
3	00+24	228+88.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
4	00+28	228+92.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
5	00+32	228+96.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
6	00+36	229+00.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
7	00+40	229+04.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
8	00+44	229+08.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
9	00+48	229+12.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
10	00+52	229+16.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
11	00+56	229+20.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
12	00+60	229+24.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
13	00+64	229+28.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
14	00+68	229+32.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
15	00+72	229+36.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
16	00+76	229+40.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
17	00+80	229+44.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
18	00+84	229+48.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
19	00+88	229+52.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
20	00+92	229+56.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
21	00+96	229+60.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
22	01+00	229+64.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
23	01+04	229+68.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
24	01+08	229+72.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
25	01+12	229+76.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
26	01+16	229+80.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
27	01+20	229+84.00	18.0' Lt	716.28	746.53	739.00	30.25	30.0	30.0
TOTALS CARRIED TO GENERAL SUMMARY							817	810	810

