

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CUY-252-3.10/ VAR

OLMSTED TOWNSHIP
RUSSELL TOWNSHIP
TROY TOWNSHIP

PROJECT DESCRIPTION

THIS PROJECT INCLUDES THE REPLACEMENT OF THREE
ROADWAY CULVERT PIPES AND HEADWALLS WITH
PAVEMENT RESTORATION AND MINOR GUARDRAIL WORK.

MAINTENANCE PROJECT

PROJECT EARTH DISTURBED AREA: N/A
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A
NOTICE OF INTENT EARTH DISTURBED AREA: N/A

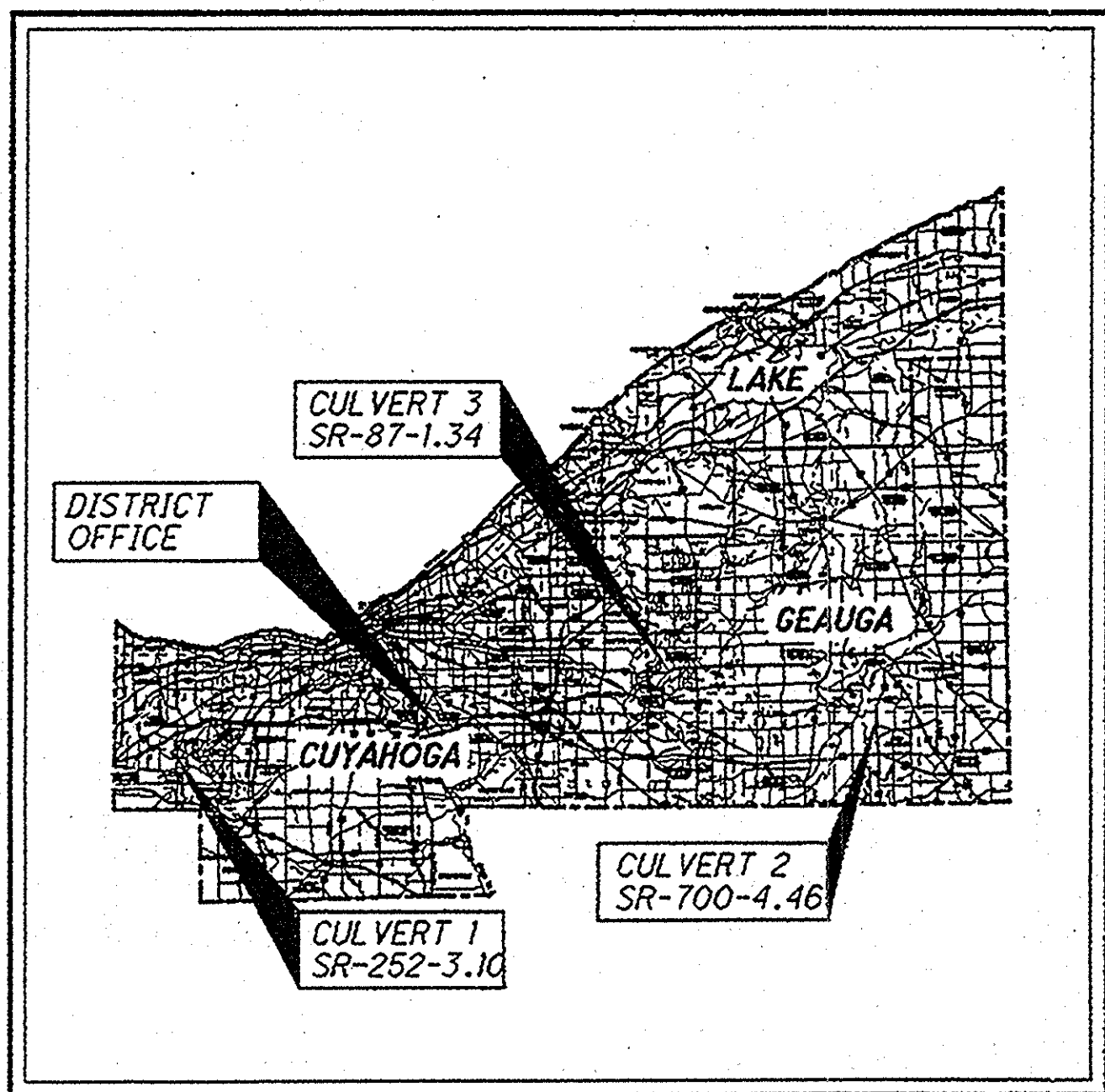
2010 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT
THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE
THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS
NOTED ON SHEETS IIA AND IIB, AND THAT PROVISIONS
FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL
BE AS SET FORTH ON THE PLANS AND ESTIMATES.

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LOCATION MAP

DISTRICT OFFICE - DISTRICT TWELVE
LATITUDE: N 41°24'50"± LONGITUDE: W 81°36'56"±
FOR CULVERT LOCATIONS - SEE SHEET 2



PORTION TO BE IMPROVED.....	
INTERSTATE HIGHWAY.....	
FEDERAL ROUTES.....	
STATE ROUTES.....	
COUNTY & TOWNSHIP ROADS.....	
OTHER ROADS.....	

DESIGN EXCEPTIONS

NONE REQUIRED

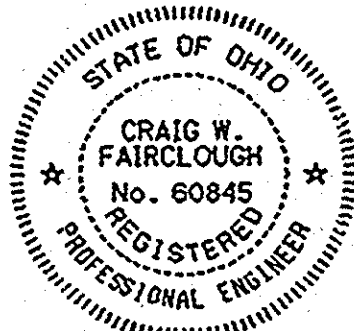
UNDERGROUND UTILITIES
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG
CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY
OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: 1-800-925-0988

Hatch Mott
MacDonald L.L.C.

ENGINEER OF RECORD
FOR:
CUY-252-3.10
(HEADWALLS & M.O.T.
PLANS)
GEA-700-4.46
(HEADWALLS & STRUCTURE
PLANS)

ENGINEERS SEAL:

ENGINEERS SEAL:



SIGNED: *Craig W. Fairclough*
DATE: March 5, 2012



SIGNED: *Michael King Moriarty*
DATE: MARCH 6, 2012

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
	MT-96.11	1/16/09	RM-4.2	10/15/10	TC-73.10	1/19/01	800-2012 4-20-12 WPC 02-14-12
	MT-96.20	10/21/11					832 5/5/09
	MT-96.26	1/16/09					823 10/16/10
DM-1.1	1/21/11						
DM-1.4	4/21/06						
DM-4.3	4/17/09	MT-97.10	10/15/10				898 10/21/11
DM-4.4	4/17/09	MT-97.11	10/15/10				
GR-1.1	7/16/04	MT-99.20	1/16/09				
GR-2.1	1/16/04	MT-101.60	4/17/09				
GR-2.4	4/18/03	MT-101.70	4/15/11				
GR-4.2	1/20/12	MT-101.90	10/21/11				
HW-1.1	7/30/07						
HW-2.1	7/30/07	MT-105.10	1/16/09				
HW-2.2	7/30/07						

APPROVED *Myra S. Pol*
DATE 03-06-12 DISTRICT DEPUTY DIRECTOR

APPROVED *Jerry W. Wray*
DATE 3/22/12 DIRECTOR, DEPARTMENT OF
TRANSPORTATION

FEDERAL PROJECT NO.
NON-FEDERAL

PID NO.
85315

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT

NONE

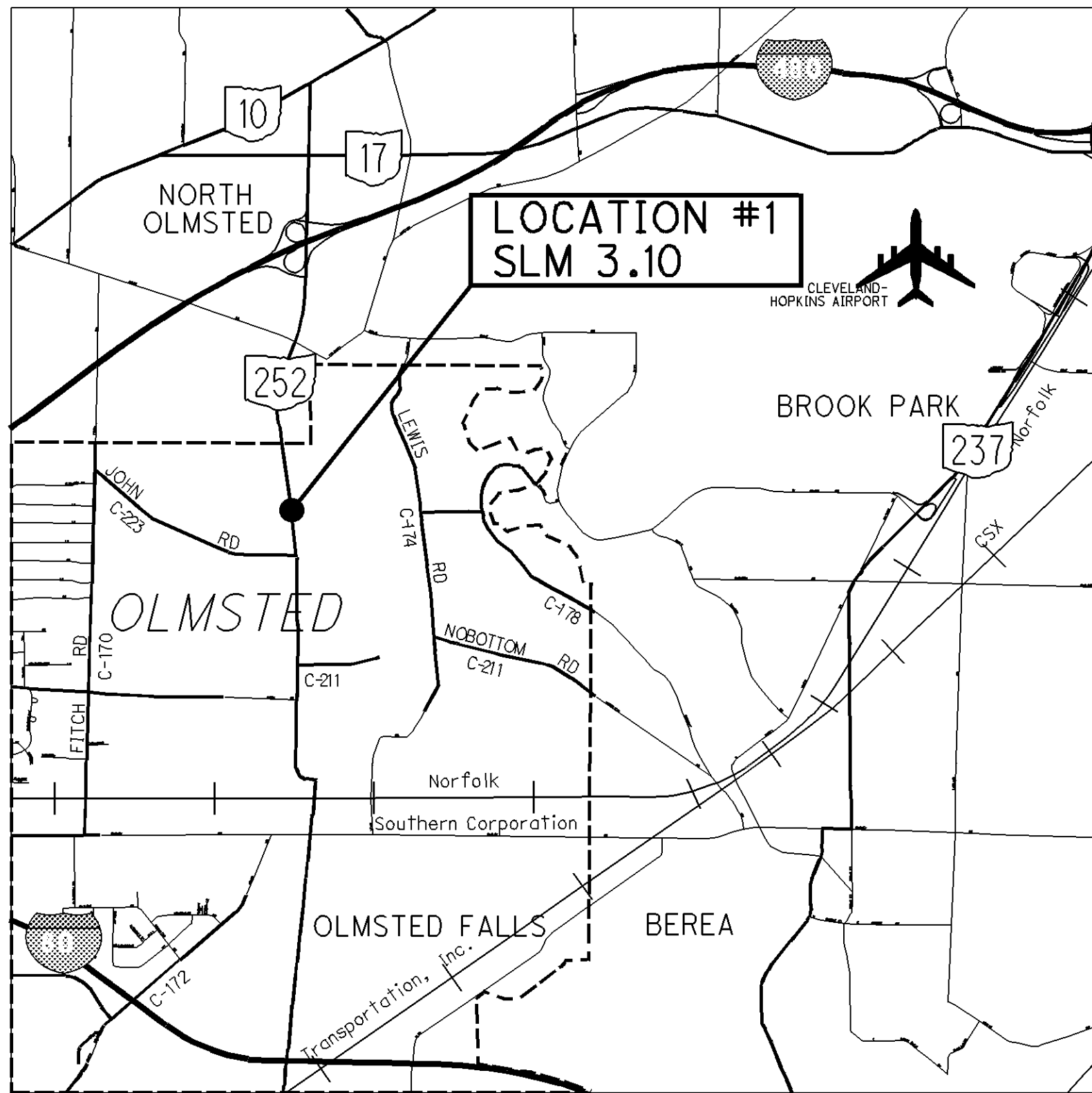
CUY-252-3.10/ VAR

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CUY - SR-252-3.10/VAR
120390 PID - 85315
Dist 12 6/7/2012

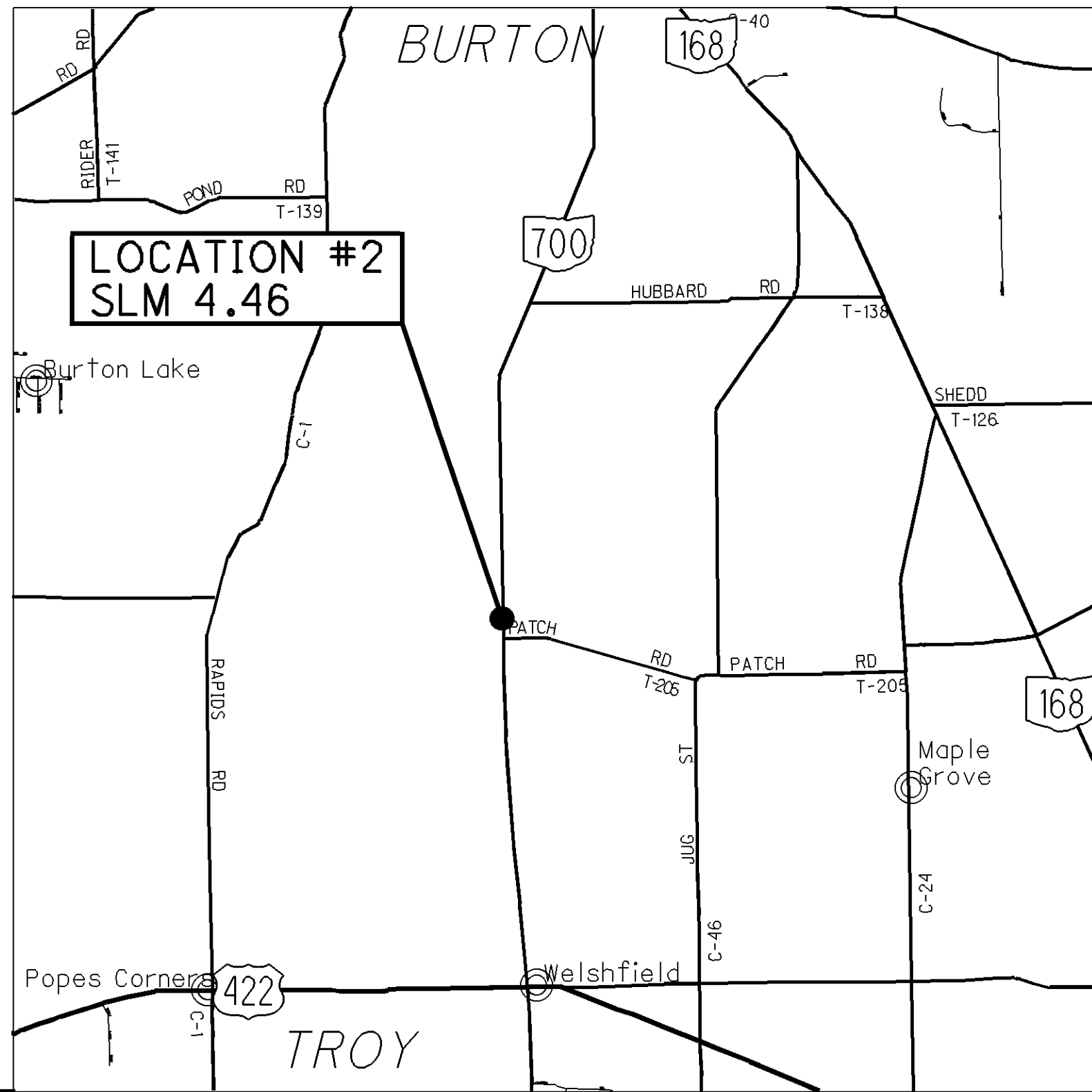
Contract Proposal Available
@www.contracts.dot.
state.oh.us/home

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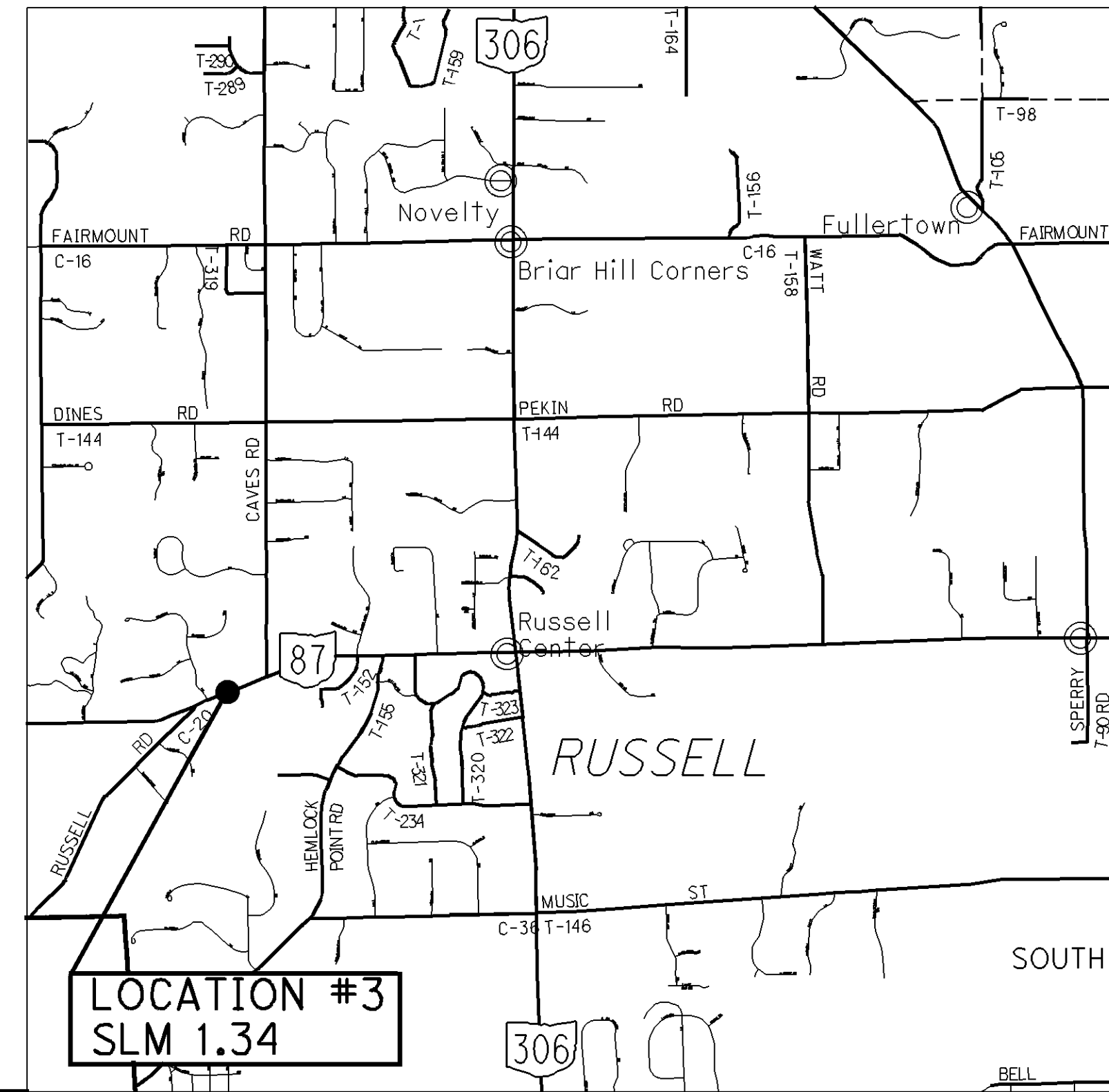
LATITUDE: N41°23'41" LONGITUDE: W81°54'18"

DESIGN DESIGNATION	CUY-252-3.10
CURRENT ADT (2007)	15200
TRUCKS (24 HOUR B&C)	3.68%
DESIGN SPEED	35 MPH
LEGAL SPEED	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
URBAN PRINCIPAL ARTERIAL	



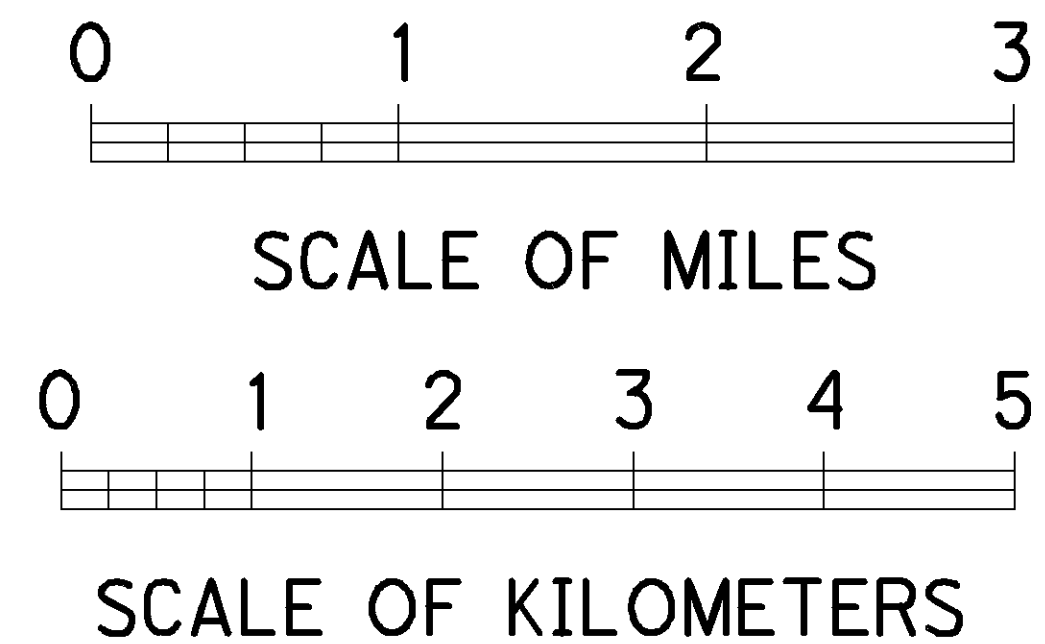
LATITUDE: N41°24'48" LONGITUDE: W81°24'03"

DESIGN DESIGNATION	GEA-700-4.46
CURRENT ADT (2007)	3000
TRUCKS (24 HOUR B&C)	4.17%
DESIGN SPEED	55 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
RURAL MAJOR COLLECTOR	

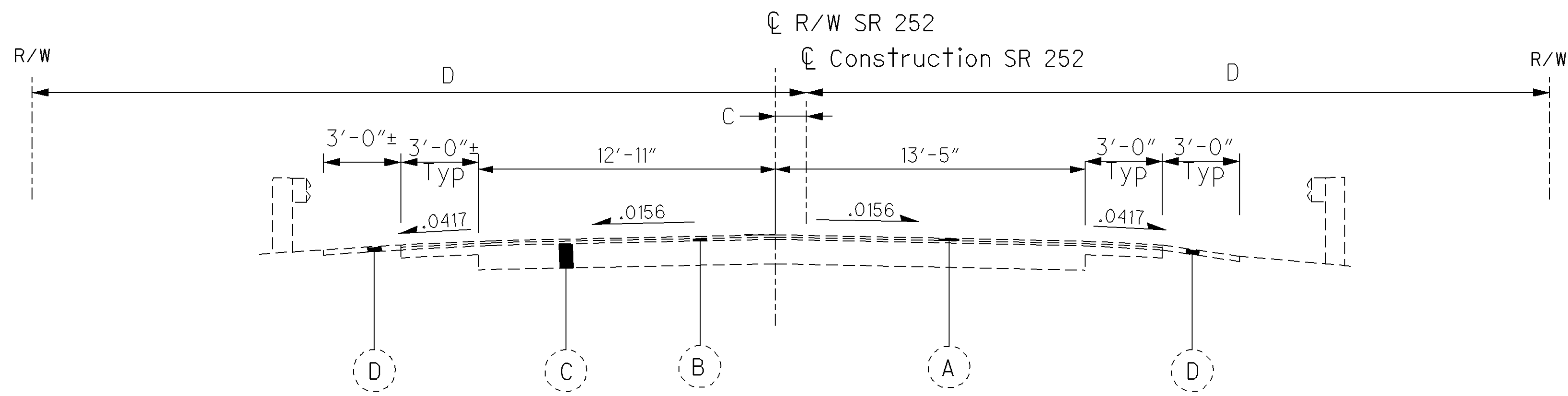


LATITUDE: N41°27'41" LONGITUDE: W81°21'59"

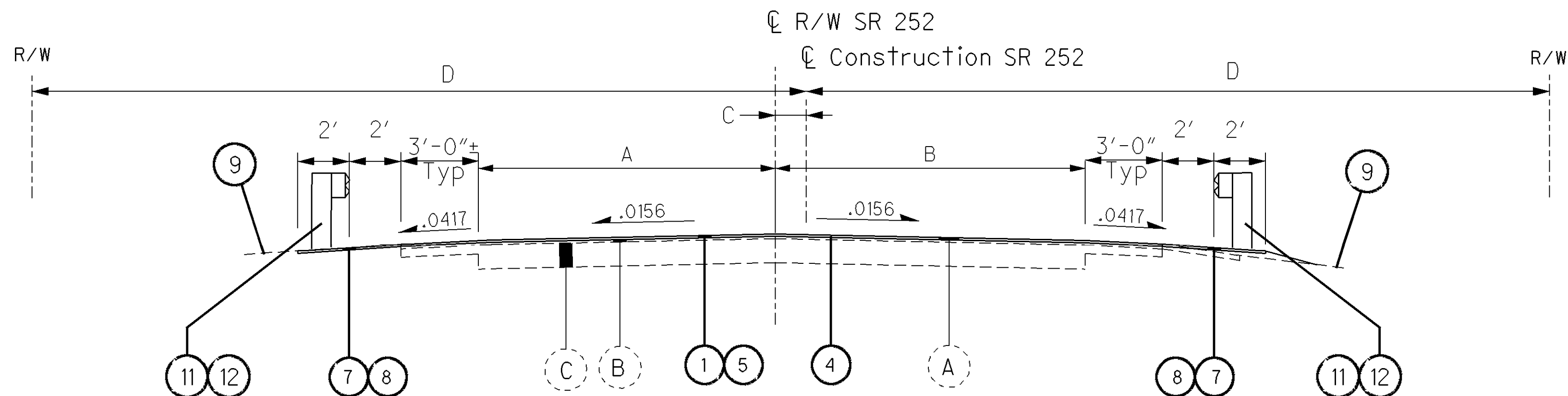
DESIGN DESIGNATION	GEA-87-1.34
CURRENT ADT (2007)	6590
TRUCKS (24 HOUR B&C)	2.81%
DESIGN SPEED	50 MPH
LEGAL SPEED	50 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
URBAN MINOR ARTERIAL	



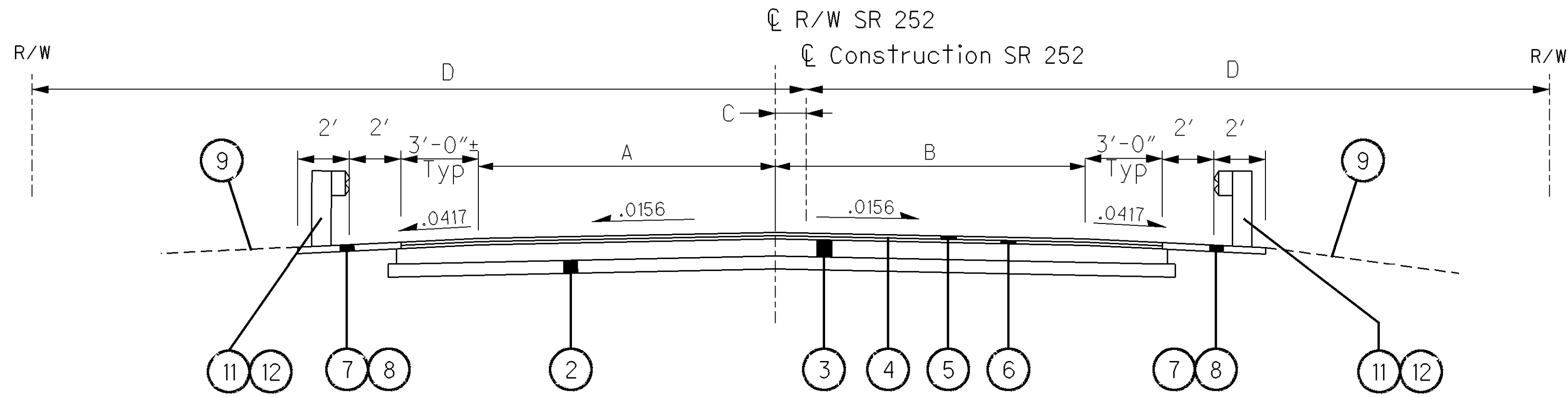
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EXISTNG SECTION
CUY-252-3.10



RESURFACING SECTION
STA. 38+27.38 TO STA. 38+48.38, SR 252 - 3.10
STA. 38+56.38 TO STA. 38+77.38, SR 252 - 3.10



FULL DEPTH REPLACEMENT SECTION
STA. 38+48.38 TO STA. 38+56.38, SR 252 - 3.10

LEGEND - EXISTING

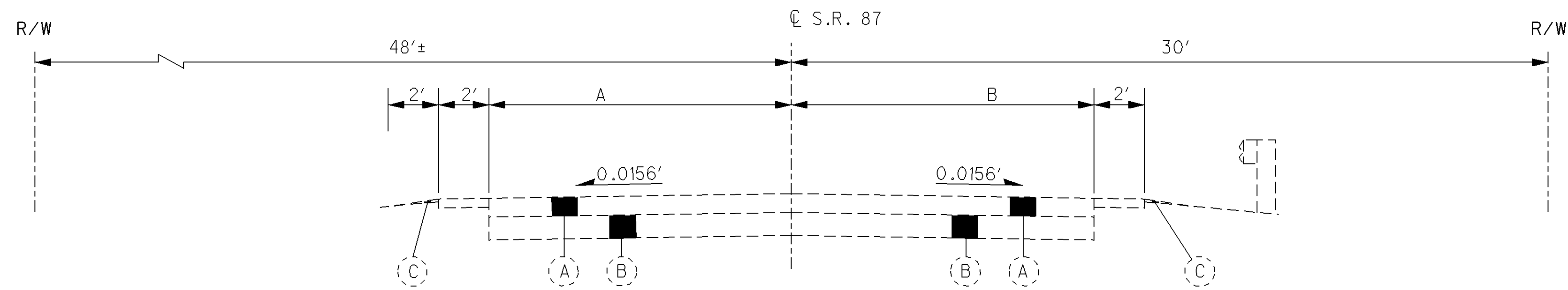
- (A) ITEM 446 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG76-22M (1.25")
- (B) ITEM 826 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, FIBER B, PG70-22M (1")
- (C) ASPHALT CONCRETE, BRICK, OR REINFORCED CONCRETE
- (D) ITEM 617 - COMPACTED AGGREGATE

LEGEND - PROPOSED

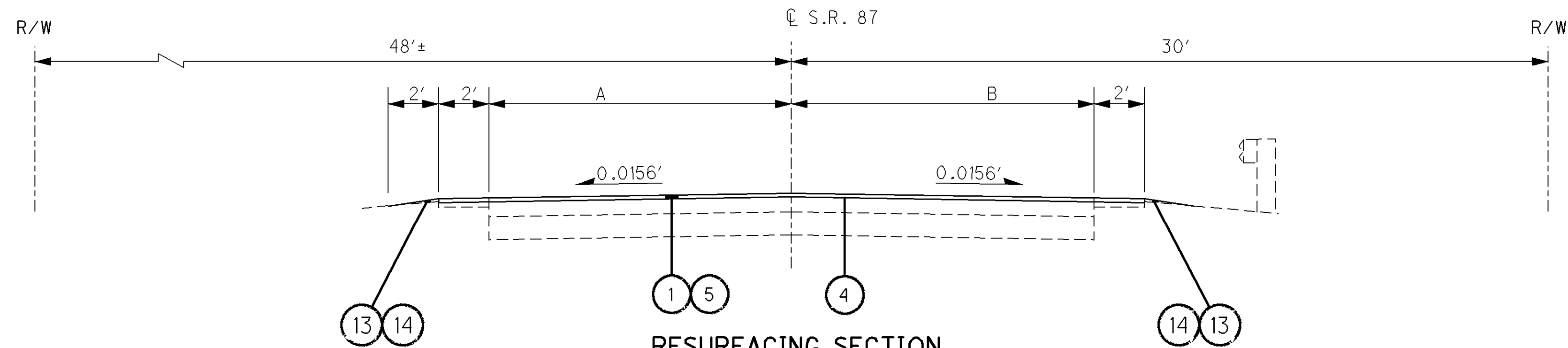
- (1) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, (T= 1½" NOMINAL)
- (2) ITEM 304 - 6" AGGREGATE BASE
- (3) ITEM 301 - 9" ASPHALT CONCRETE BASE, PG64-22
- (4) ITEM 407 - TACK COAT
- (5) ITEM 448 - 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22, AS PER PLAN
- (6) ITEM 448 - 1½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22
- (7) ITEM 448-3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22, UNDER GUARDRAIL, AS PER PLAN
- (8) ITEM 209 - LINEAR GRADING, AS PER PLAN "B"
- (9) ITEM 659 - SEEDING AND MULCHING
- (11) ITEM 606 - GUARDRAIL, TYPE 5
- (12) ITEM 202 - GUARDRAIL REMOVED

DIMENSION TABLE				
LOCATION	A	B	C	D
CUY-252-3.10	11'-6"±	12'-0"±	1.2'±	30'±

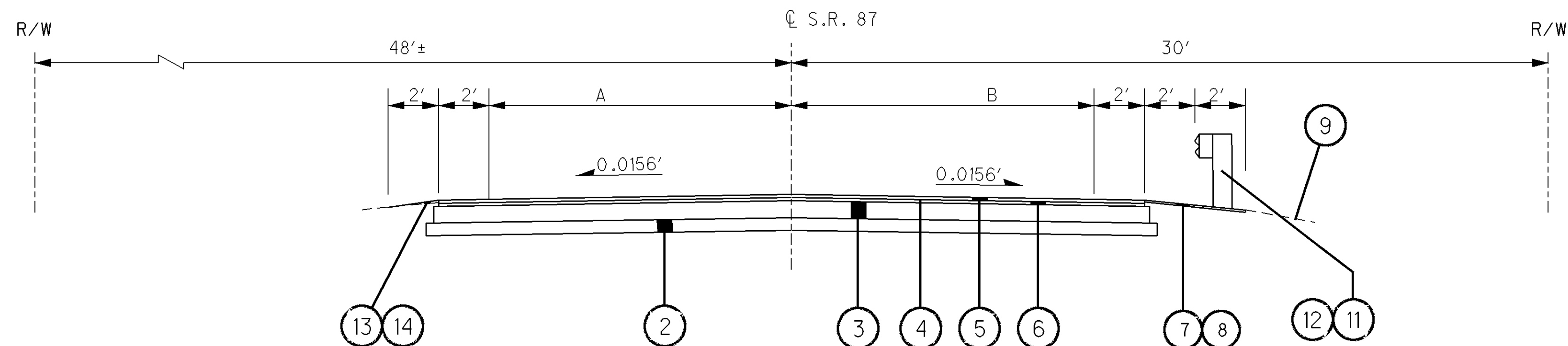
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EXISTING SECTION
GEA-87-1.34



STA. 70+64 TO STA. 70+82.5, SR 87 - 1.34
STA. 70+85.5 TO STA. 71+04, SR 87 - 1.34



FULL DEPTH REPLACEMENT SECTION
STA. 70+82.50 TO STA. 70+85.5, SR 87 - 1.34

LEGEND - EXISTING

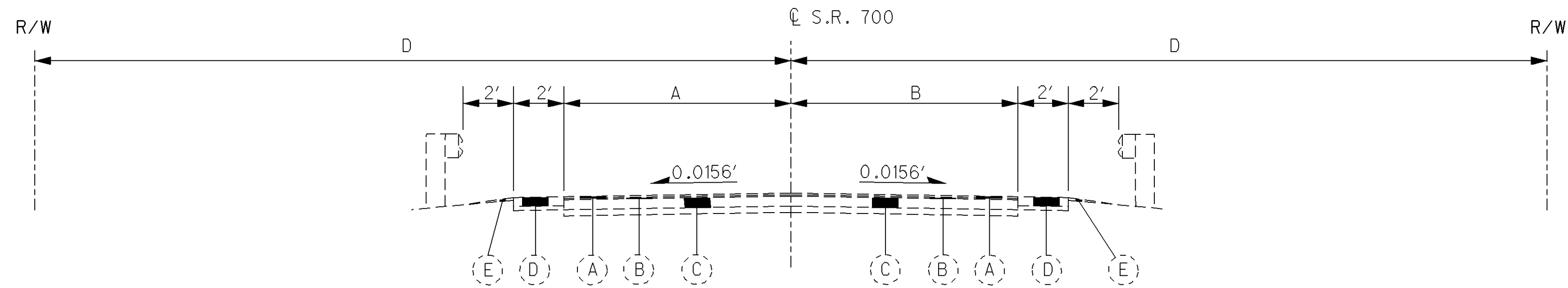
- (A) ASPHALT CONCRETE (9"±)
- (B) MACADAM BASE (11"±)
- (C) COMPACTED AGGREGATE

LEGEND - PROPOSED

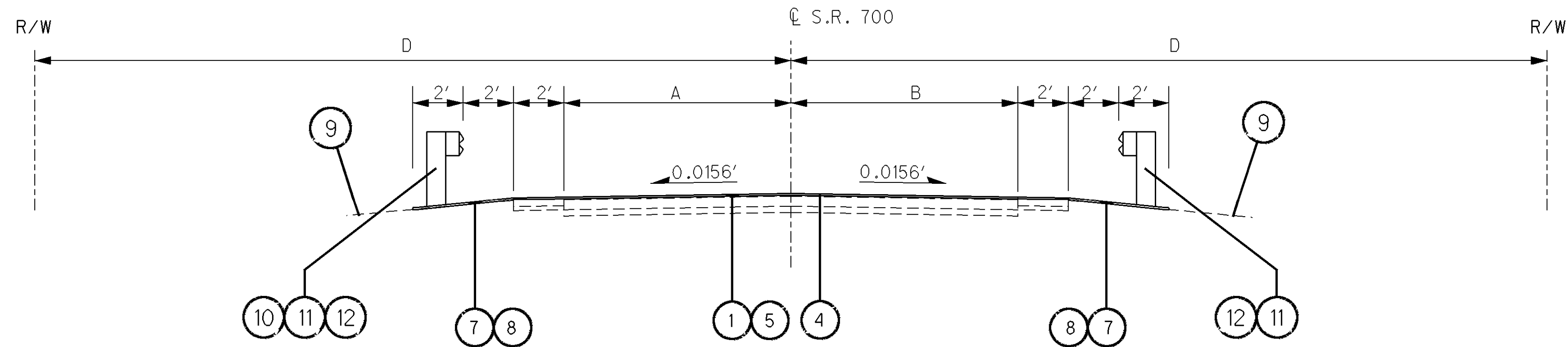
- (1) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, (T= 1 1/2" NOMINAL)
- (2) ITEM 304 - 6" AGGREGATE BASE
- (3) ITEM 301 - 9" ASPHALT CONCRETE BASE, PG64-22
- (4) ITEM 407 - TACK COAT
- (5) ITEM 448 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22, AS PER PLAN
- (6) ITEM 448 - 1 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22
- (7) ITEM 448-3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22, UNDER GUARDRAIL, AS PER PLAN
- (8) ITEM 209 - LINEAR GRADING, AS PER PLAN "B"
- (9) ITEM 659 - SEEDING AND MULCHING
- (11) ITEM 606 - GUARDRAIL, TYPE 5
- (12) ITEM 202 - GUARDRAIL REMOVED
- (13) ITEM 209 - LINEAR GRADING, AS PER PLAN "A"
- (14) ITEM 617 - COMPACTED AGGREGATE, (2")

DIMENSION TABLE				
LOCATION	A	B		
GEA-87-1.34	12'-0"±	12'-0"±		

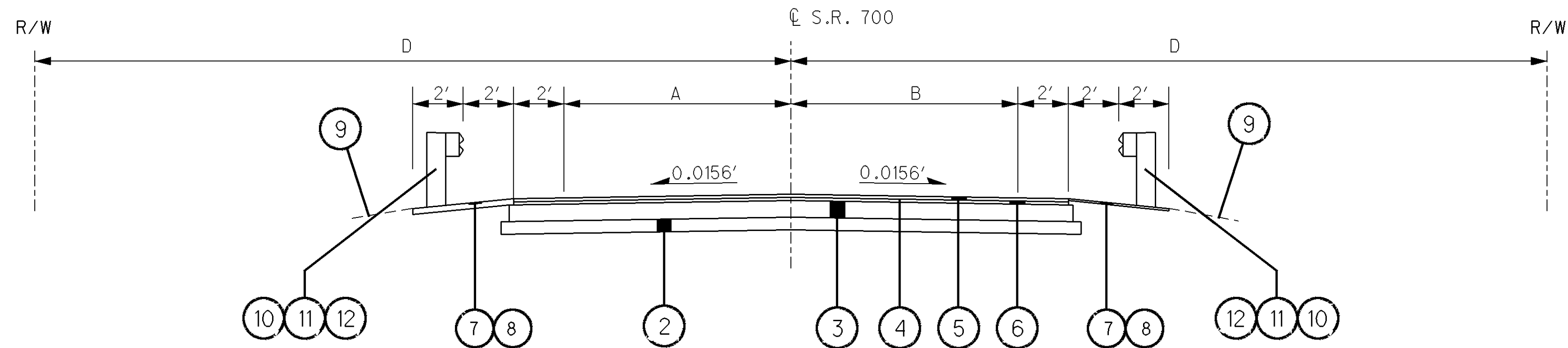
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EXISTING SECTION
GEA-700-4.46



RESURFACING SECTION
STA. 13+46.29 TO STA. 13+63.29, SR 700 - 4.46
STA. 13+79.29 TO STA. 13+96.29, SR 700 - 4.46



FULL DEPTH REPLACEMENT SECTION
STA. 13+63.29 TO STA. 13+79.29, SR 700 - 4.46

LEGEND - EXISTING

- (A) ITEM 446 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M (1.5")
- (B) ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (1")
- (C) 6.5"± ASPHALT CONCRETE
- (D) 8.5"± ASPHALT CONCRETE SHOULDER
- (E) ITEM 617 - COMPACTED AGGREGATE

LEGEND - PROPOSED

- (1) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, (T= 1½" NOMINAL)
- (2) ITEM 304 - 6" AGGREGATE BASE
- (3) ITEM 301 - 9" ASPHALT CONCRETE BASE, PG64-22
- (4) ITEM 407 - TACK COAT
- (5) ITEM 448 - 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22, AS PER PLAN
- (6) ITEM 448 - 1½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22
- (7) ITEM 448-3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22, UNDER GUARDRAIL, AS PER PLAN
- (8) ITEM 209 - LINEAR GRADING, AS PER PLAN "B"
- (9) ITEM 659 - SEEDING AND MULCHING
- (10) ITEM 606 - GUARDRAIL, TYPE 5, LONG SPAN ACROSS CULVERT
- (11) ITEM 606 - GUARDRAIL, TYPE 5
- (12) ITEM 202 - GUARDRAIL REMOVED

DIMENSION TABLE				
LOCATION	A	B		D
GEA-700-4.46	9'-0"±	9'-0"±		30'±

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UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR REPECTIVE OWNERS;

DOMINION EAST OHIO 320 SPRINGSIDE DR. FAIRLAWN, OHIO 44333 PH: (330) 664-2488 ATTN: MIKE ANTONIUS	TIME WARNER CABLE 14300 SOUTH INDUSTRIAL PKWY. MAPLE HEIGHTS, OHIO 44137 PH: (216) 663-4003 ATTEN: KIP EIGER
ILLUMINATING COMPANY 6896 MILLER RD. BRECKSVILLE, OHIO 44141 PH: (440) 717-6845 ATTN: MARK ROBINSON	CITY OF CLEVELAND, DIV. OF WATER 1201 LAKESIDE AVE. CLEVELAND, OH 44114 PH: (216) 664-2444 EXT. 5555 ATTN: GUY SINGER
OSP FIBER OPTIC CABLE 5524 BEE CAVE RD., C-1 AUSTIN, TEXAS 78746 PH: 513-254-4348 ATTN: DANA T. COSTA OSP ENGINEERING	OSP FIBER OPTIC CABLE 2797 HAMILTON AVE. CLEVELAND, OHIO 44114 PH: 216-589-9364 ATTN: MARK BURNSIDE OSP FIELD TECHNICIAN

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

ALL BIDDERS SHALL FOLLOW OSHA RULE 1926.21

RIGHT-OF-WAY

ALL WORK SHALL BE PERFORMED WITHIN THE EXISTING RIGHT OF WAY, NEW RIGHT OF WAY OR TEMPORARY EASEMENTS.

EXISTING TYPICAL SECTIONS

EXISTING TYPICAL SECTIONS HAVE BEEN TAKEN FROM THE RECORDS AND ARE BELIEVED TO REPRESENT THE EXISTING PAVEMENT BUT THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THE SAME.

FOR FURTHER INFORMATION IN REGARD TO THE EXISTING TYPICAL SECTIONS, THE CONTRACTOR SHALL REFER TO THE PREVIOUS CONSTRUCTION PLANS.

THESE PLANS MAY BE REVIEWED AT THE FOLLOWING LOCATION:

OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 12 OFFICE
5500 TRANSPORTATION BLVD.
GARFIELD HEIGHTS, OHIO 44125

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 THE COMPLETION OF THIS PROJECT.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THE WORK LIMITS.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

GUARDRAIL REPLACEMENT

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE THE EXISTING GUARDRAIL, PREPARE THE SITE AND INSTALL NEW GUARDRAIL IN A CONTINUOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL, AT ALL TIMES, BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ONSITE AND READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED UNTIL SUCH TIME AS THE ENGINEER IS ASSURED OF COMPLIANCE.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED OR PUNCHED. THE CONNECTION SHALL BE MADE USING W-BEAM RAIL SPLICE AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

EQUIPMENT AND MATERIAL STORAGE

IN ORDER TO PROVIDE FOR THE SAFETY OF THE TRAVELING PUBLIC, THE CONTRACTOR'S ATTENTION IS DIRECTED TO 614.03. IN ADDITION, THE FOLLOWING PROVISIONS SHALL APPLY:

1. ANY REMOVED ITEMS SHALL NOT BE STORED ON THE RIGHT OF WAY FOR MORE THAN THIRTY (30) DAYS.
2. THE STORAGE OF EQUIPMENT, MATERIALS AND VEHICLES WITHIN THE HIGHWAY RIGHT OF WAY WILL BE PERMITTED. THE NUMBER OF AREAS AND EXACT LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL DISTURBED AREAS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE STATE.

ITEM 619 FIELD OFFICE, TYPE B

A TYPE B FIELD OFFICE IS REQUIRED FOR THIS PROJECT. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 619-FIELD OFFICE, TYPE B 3 MONTHS

GEA-87-1.34
ITEM 603 – 24” CONDUIT, TYPE A, APP

THE FOLLOWING CONDUITS ARE PERMISSIBLE:
24” 706.02
24” 707.01 (0.138) ALUMINUM COATED
24” 707.05 (0.079) ALUMINUM COATED
24” 707.04 (1/2”) (0.079) POLYMER COATED
24” 707.04 (1/2”) (0.064) PAVED PER 707.07

CUY-252-3.10
ITEM 603-15” CONDUIT, TYPE C, APP
ITEM 603 12” CONDUIT, TYPE C, APP

THE FOLLOWING CONDUITS ARE PERMISSIBLE AT THEIR RESPECTIVE LOCATIONS AS SHOWN ON SHEET 15:
15” 706.08 VITRIFIED CLAY PIPE
12” 707.43 POLYVINYL CHLORIDE PIPE

ITEM 661 – DECIDUOUS TREE, 1” CALIPER

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR REPLACEMENT OF EXISTING VEGETATION. LOCATION OF TREES SHALL BE AS DIRECTED BY ENGINEER AND AS SHOWN ON SHEET 17:

ITEM 661 40040 –	DECIDUOUS TREE, 1” CALIPER, RED MAPLE, ACER RUBRUM, BALLED/BURLAP	5 EACH
ITEM 661 40040 –	DECIDIUOS TREE, 1" CALIPER, BLACK MAPLE, ACER NIGRUM BALLED/BURLAP	5 EACH

ITEM 202 - PIPE REMOVED, OVER 24", AS PER PLAN
ITEM 202 - PIPE REMOVED, 24" AND UNDER, AS PER PLAN

IN ADDITION TO THE REMOVAL OF THE EXISTING CONDUIT, THIS ITEM SHALL INCLUDE REMOVAL OF THE PAVEMENT AND PAVED SHOULDERS WITHIN THE LIMITS SHOWN ON THE PLANS. ALL WORK SHALL BE IN ACCORDANCE WITH SECTION 202 OF THE CMS.

THE CONTRACTOR SHALL REMOVE AND SALVAGE ALL SANDSTONE BLOCKS FROM CUY-252-3.10, AS DETERMINED BY THE ENGINEER, TO BE DELIVERED TO AN O.D.O.T. YARD. THE SALVAGED SANDSTONE BLOCK SHALL BE TRANSPORTED BY THE CONTRACTOR TO:

O.D.O.T. - RIVEREDGE MAINTENANCE YARD
4900 OLD GRAYTON ROAD
CLEVELAND, OHIO 44135
PHONE: (216)584-2207 / FAX: (216) 267-7829

THE YARD SHALL BE CONTACTED APPROXIMATELY 1 WEEK PRIOR TO DELIVERY.

STREAM CHANNEL EXCAVATION

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL HAULING OF MATERIAL FROM THE STREAM CHANNEL. THIS PERTAINS TO ANY EXCAVATION OPERATIONS (I.E. CHANNEL CLEANOUT, EXCAVATION FOR ROCK CHANNEL PROTECTION AND REMOVAL OF ANY TEMPOARARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS).

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER OPERATED CONSTRUCTION TYPE DEVICES BETWEEN THE HOURS OF 9 PM AND 7 AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE RESONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

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CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING THE LAY OF THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT OR EXISTING APPERTANANCE TO BE CONNECTED DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN IN THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 ITEM.

ITEM 209 – LINEAR GRADING, AS PER PLAN “A”

THIS ITEM SHALL BE USED TO PREPARE THE SHOULDER PER SECTION 617.04 OF THE CMS PRIOR TO PLACING THE COMPACTED AGGREGATE, TYPE A.

ALL EQUIPMENT, MATERIALS, AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 209 – LINEAR GRADING, AS PER PLAN “A”.

PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 209 – LINEAR GRADING, AS PER PLAN “A”

PAVING UNDER GUARDRAIL

ITEM 209 – LINEAR GRADING, AS PER PLAN “B”
ITEM 448 – ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22, UNDER GUARDRAIL, AS PER PLAN

THIS OPERATION SHALL INCLUDE PREPERATION OF THE GRADED SHOULDER USING ITEM 209, LINEAR GRADING AS PER PLAN “B” AND PAVING UNDER THE GUARDRAIL USING 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22, UNDER GUARDRAIL AS PER PLAN.

ITEM 209, LINEAR GRADING AS PER PLAN “B”, SHALL CONSIST OF EXCAVATION TOPSOIL AND PLACING GRANULAR MATERIAL.

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATED MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 105.17.

THE REMOVED MATERIAL SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO 703.16 PLACED TO GRADE AS DETAILED ON THE TYPICAL SECTION OR AS APPROVED BY THE ENGINEER.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 209, LINEAR GRADING AS PER PLAN “B”.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 448 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

- METHOD A:
- 1. SET GUARDRAIL POSTS
 - 2. PLACE ITEM 448

- METHOD B:
- 1. PLACE ITEM 448
 - 2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
 - 3. SET GUARDRAIL POSTS
 - 4. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 448, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, PG 64-22, UNDER GUARDRAIL AS PER PLAN.

ITEM 448- ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22, AS PER PLAN

THE COURSE AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO CRUSHED CARBONATE STONE, AIR COOLED BLAST FURNACE SLAG OR A 50/50 BLEND OF AIR COOLED BLAST FURNACE SLAG (ACBFS) AND LIMESTONE (CCS).

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON ASSUMED DATUM.

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COOPERATE AND COORDINATE HIS OPERATIONS WITH THE CONTRACTORS ON OTHER PROJECTS THAT MAY BE IN FORCE DURING THE LIFE OF THE CONTRACT. NO WAIVER OF ANY PROVISIONS OF 105.08 OF THE CMS IS INTENDED.

DRIVEWAY ACCESS

INGRESS AND EGRESS TO ALL RESIDENTIAL AND COMMERCIAL DRIVEWAYS WITHIN THE PROJECT AREA SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THE CULVERT REPLACEMENT LOCATED AT COUNTY-ROUTE-SECTION, CUY-252-3.10, HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 118 FEET. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA) AND ODOT OFFICE OF AVIATION WILL BE

NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. A COPY OF THE SUBMISSION AND TWO COPIES OF FORM 7460-1 SHALL BE FORWARDED TO THE ODOT OFFICE OF AVIATION.

NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT UNTIL A COPY OF THE FAA APPROVAL AND ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

EXPRESS PROCESSING CENTER
THE FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
AIR TRAFFIC AIRSPACE BRANCH ASW-520
2601 MEACHAN BLVD.
FORTWORTH, TEXAS 76173-4298

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
614-387-2346

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPERTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS AND MANHOLES CONSTRUCTED AS PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

PART WIDTH CONSTRUCTION (GEA-87-1.34)

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXCERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN IN STANDARD CONSTRUCTION DRAWING BP-3.1.

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ENVIRONMENTAL COMMITMENTS

WORK WITHIN THE UPPER CUYAHOGA STATE SCENIC RIVER, IN GEAUGA COUNTY (GEA-87-1.34 AND GEA-700-4.46), CAN ONLY BE PERFORMED BETWEEN AUGUST 1, 2012 AND OCTOBER 31, 2012.

CUTTING OF TREES WITH SUITABLE ROOSTING AND BROOD-REARING HABITAT FOR INDIANA BAT (LIVING OR STANDING DEAD TREES OR SNAGS WITH EXFOLIATING, PEELING OR LOOSE BARK, SPLIT TRUNKS AND/OR BRANCHES, OR CAVATIES) WILL BE PERFORMED ONLY BEFORE APRIL 1ST OR AFTER SEPTEMBER 30TH WHEN THE SPECIES WOULD NOT BE USING SUCH HABITAT.

A SURVEY OF THE CULVERTS FOR THE PRESENCE OF BATS WILL BE CONDUCTED BY THE DISTRICT PRIOR TO CONSTRUCTION. IF BATS ARE IDENTIFIED, COORDINATION WITH USFWS WILL BE INITIATED.

REPLACEMENT TREES MUST BE PLANTED AT SR 87 CULVERT SITE.

DISTRICT TO OBTAIN ALL APPLICABLE PERMITS.

ITEM 832 – EROSION CONTROL AS PER PLAN

STRAW BALES SHALL NOT BE PERMITTED AS A FORM OF EROSION CONTROL. ALL DENUDED AREAS, INCLUDING DITCHES, CULVERTS AND RIVER/STREAM BANKS, SHALL BE PERMANENTLY SEEDED AND MULCHED (OR FIBER MAT) IMMEDIATELY UPON COMPLETION OF EARTHWORK OR TEMPORARILY SEEDED AND MULCHED (OR FIBER MAT) WITHIN SEVEN DAYS IF THE AREA IS TO REMAIN IDLE FOR MORE THAN THIRTY DAYS. ALL OTHER REQUIREMENTS IN ITEM 832 SHALL APPLY.

PAYMENT FOR ITEM 832-EROSION CONTROL AS PER PLAN . . . 6000 (EACH) HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 659-SEEDING AND MULCHING

THE BELOW QUANTITES ARE FOR INFORMATIONAL PURPOSES. SEE SHEET 14 FOR THE CALCULATED QUANTITIES, THAT HAVE BEEN CARRIED TO THE GENERAL SUMMARY AND ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS.

CUY-252-3.10

ITEM 659, TOPSOIL,	78 CU. YD.
ITEM 659, SEEDING AND MULCHING,	700 SQ. YD.
ITEM 659, COMMERCIAL FERTILIZER	0.06 TON
ITEM 659, LIME,	0.14 ACRES
ITEM 659, WATER,	1.9 M. GAL.

GEA-87-1.34

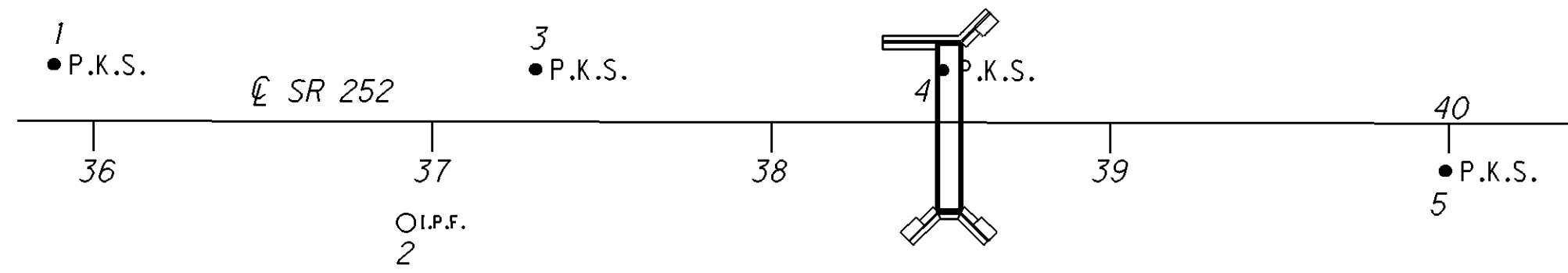
ITEM 659, TOPSOIL	85 CU. YD.
ITEM 659, SEEDING AND MULCHING	766 SQ. YD.
ITEM 659, COMMERCIAL FERTILIZER	0.07 TON
ITEM 659, LIME	0.16 ACRES
ITEM 659, WATER	2.07 M GAL.

GEA-700-4.46

ITEM 659, TOPSOIL	60 CU. YD.
ITEM 659, SEEDING AND MULCHING	539 SQ. YD.
ITEM 659, COMMERCIAL FERTILIZER	0.05 TON
ITEM 659, LIME	0.11 ACRES
ITEM 659, WATER	1.46 M GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF THE EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS AND FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY EASEMENTS AND WORK AGREEMENTS. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

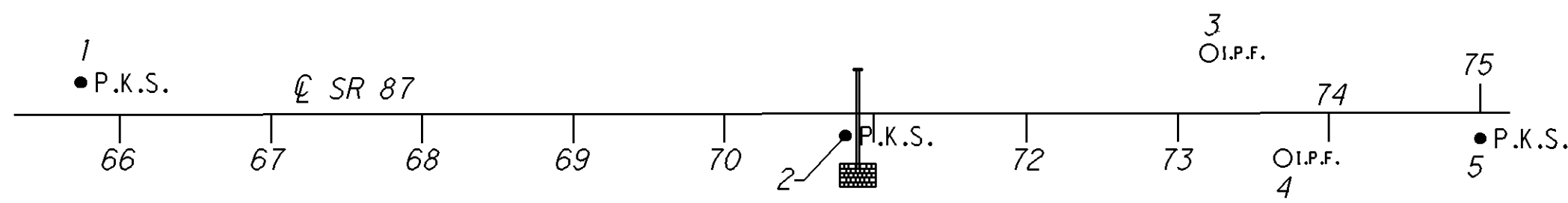
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REFERENCE	STA.	OFFSET	ELEVATION
1	35+88.42	16.5844' LT	762.9490
2	36+92.33	29.8027' RT	761.7897
3	37+30.50	15.4605' LT	759.4890
4	38+50.67	15.3193' LT	756.3170
5	39+98.97	14.1755' RT	758.4110

CUY-252-3.10

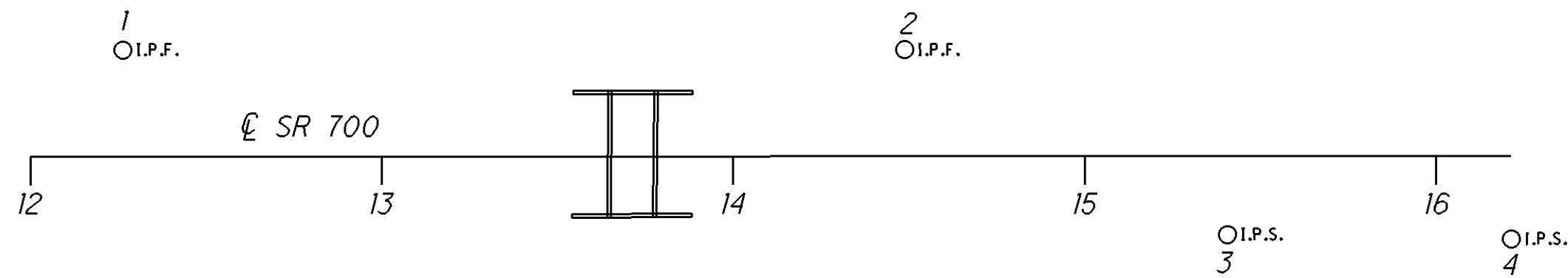
O.I.P.F. IRON PIN FOUND
P.K.S. PK NAIL SET



REFERENCE	STA.	OFFSET	ELEVATION
1	65+74.29	21.0418' LT	1101.2016
2	70+80.16	14.8987' RT	1082.1652
3	73+20.31	39.5604' LT	1091.8876
4	73+69.51	29.9958' RT	1085.6920
5	75+00.00	17.2313' RT	1091.4332

GEA-87-1.34

O.I.P.F. IRON PIN FOUND
P.K.S. PK NAIL SET



REFERENCE	STA.	OFFSET	ELEVATION
1	12+26.34	30.2800' LT	1125.4060
2	14+48.70	30.2673' LT	1116.4510
3	15+40.63	22.3725' RT	1121.6407
4	16+21.49	23.6344' RT	1125.2728

GEA-700-4.46

O.I.P.F. IRON PIN FOUND
O.I.P.S. IRON PIN SET

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WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION 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 THE WORK LIMITS.

ITEM 614 MAINTAINING TRAFFIC

THE CONTRACTOR SHALL NOTIFY THE GEAUGA COUNTY ENGINEER, CUYAHOGA COUNTY ENGINEER, THE GEAUGA COUNTY SHERRIFS OFFICE, CUYAHOGA COUNTY SHERRIFS OFFICE AND THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 12 PUBLIC INFORMATION OFFICE BY EMAIL AT "D12.PUBLICINFORMATION@DOT.STATE.OH.US" OR BY FAX AT 216-584-3524 NOT LESS THAN 24 (24) HOURS PRIOR TO A SCHEDULED DISRUPTION OF TRAFFIC.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PROTIONS 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 ITEM 614 – MAINTAINING TRAFFIC UNLESS SEPERATELY ITEMIZED IN THE PLAN.

ITEM 614 - MAINTENANCE OF TRAFFIC (GEA-700-4.46)

THE CONTRACTOR SHALL CLOSE SR 700 TO ALL TRAFFIC AS PER SCD MT-101.60 AND AS SHOWN ON SHEET 11A.

NOTICE OF CLOSURE SIGNS AS DETAILED IN THESE PLANS SHALL BE ERECTED BY THE CONTRACTOR AT LEAST TWO WEEKS IN ADVANCE OF THE SCHEDULED CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED AS TO NOT INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN 48 INCH X 30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES, GATES AND LIGHTS, AS DETAILED IN SCD MT-101.60 DURING PERIODS OF WHEN SR 700 IS CLOSED TO TRAFFIC.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN DETOUR SIGNS AND SIGN SUPPORTS AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND AS SHOWN ON THE DETOUR MAP, SHEET 11A.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 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 ITEM 614, MAINTENANCE OF TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ITEM 614 - MAINTENANCE OF TRAFFIC (GEA-87-1.34)

A MINIMUM OF ONE LANE IN EACH DIRECTION ON SR 87 SHALL BE MAINTAINED AT ALL TIMES BY USE OF EXISTING PAVEMENT, COMPLETED PAVEMENT, ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC AND AS PER SCD MT-97.10.

LENGTH AND DURATION OF LANE CLOSURES SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE

TRAVELING PUBLIC. LANE CLOSURES OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED FOR A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 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 ITEM 614, MAINTENANCE OF TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ITEM 614 - MAINTENANCE OF TRAFFIC (CUY-252-3.10)

SET UP TEMPORARY TRAFFIC CONTROL AS DESCRIBED BELOW AND AS SHOWN.

PHASE 1:
CONTRACTOR SHALL CLOSE STATE ROUTE 252 TO THROUGH TRAFFIC PER SCD MT-101.60 AND AS SHOWN ON SHEET 11B . THE CULVERT, HEADWALLS, WINGWALLS, AND GUARDRAIL SHALL BE CONSTRUCTED OVER 4 CONSECUTIVE DAYS (FRIDAY THROUGH MONDAY) EXCLUDING HOLIDAY WEEKENDS.

PHASE 2:
THE CONTRACTOR SHALL UTILIZE SIGNALIZED LANE CLOSURES AS SHOWN ON SHEET 11C TO CONSTRUCT THE WEST SIDE OF THE PAVEMENT.

PHASE 3:
THE CONTRACTOR SHALL UTILIZE SIGNALIZED LANE CLOSURES AS SHOWN ON SHEET 11D TO CONSTRUCT THE EAST SIDE OF THE PAVEMENT.

PHASE 4:
THE CONTRACTOR SHALL MAINTAIN TWO-WAY TRAFFIC AS SHOWN ON SHEET 11E TO CONSTRUCT ANY REMAINING ANCILLARY WORK.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER, THE RESPONSIBLE LAW ENFORCEMENT AGENCIES AND THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 12 PUBLIC INFORMATION OFFICE ((216) 584-2007) BY EMAIL AT D12.PUBLICINFORMATION@DOT.STATE.OH.US OR BY FAX AT 216-584-3524 NOT LESS THAN TWENTY FOUR (24) HOURS PRIOR TO A SCHEDULED DISRUPTION OF TRAFFIC.

THE CONTRACTOR SHALL ALSO NOTIFY IN WRITING THE FOLLOWING AGENCIES AT LEAST TWO (2) WEEKS PRIOR TO IMPLEMENTING ANY SUBSTANTIAL CHANGE IN TRAFFIC PATTERN OR CLOSING OF ANY STREET TO TRAFFIC.

CITY OF NORTH OLMSTED:
MAYOR (440) 777-8000

OLMSTED TOWNSHIP:
TOWN HALL (440) 235-3051
POLICE DEPARTMENT (440) 235-3335
FIRE DEPARTMENT (440) 235-3746
SERVICE (440) 235-1011

CITY OF OLMSTED FALLS:
MAYOR (440) 235-5550

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 4

CONSECUTIVE CALENDAR DAYS (FRIDAY THROUGH MONDAY), WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 11B . A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$5,000 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 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 ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

DESIGNATED LOCAL DETOUR ROUTE (CUY-252-3.10)

IN ADDITION TO THE OFFICIAL, SIGNED DETOUR ROUTE FOR SR 252, A LOCAL ROUTE HAS BEEN DETERMINED TO BE THE SECONDARY, UNSIGNED DETOUR ROUTE OR "DESIGNATED LOCAL DETOUR ROUTE." THIS ROUTE IS SHOWN ON SHEET NO. 11B . DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THIS ROUTE IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DESIGNATED LOCAL DETOUR ROUTE SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO ITS USE FOR THIS PURPOSE. ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DETERMINED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR USE AS DETERMINED BY THE ENGINEER TO MAINTAIN AND SUBSEQUENTLY RESTORE THE DESIGNATED LOCAL DETOUR ROUTE.

ITEM 407, TACK COAT	32 GAL.
ITEM 448, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, AS PER PLAN	18 CU. YD.
ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	36 CU. YD.
ITEM 642, CENTER LINE	3 MILE

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OVERNIGHT CULVERT TRENCH CLOSING (GEA-87-1.34)

THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED BACKFILL AND BASE MATERIAL SHALL FOLLOW CLOSELY AS POSSIBLE BEHIND THE EXCAVATION AND CONDUIT LAYING OPERATIONS. THE LENGTH OF TRENCH OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL, AT ALL TIMES, BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

THE RIDING SURFACE OVER THE TRENCH SHALL BE RESTORED TO THE SAME LEVEL AS THE EXISTING PAVEMENT AT THE END OF EACH WORK DAY BY THE USE OF TEMPORARY OR PERMANENT SURFACES. ROAD PLATES SECURED IN PLACE AND OVERLAID WITH ASPHALT CONCRETE MAY BE USED FOR OVERNIGHT TRENCH CLOSURES WHERE WORK IS TO RESUME THE NEXT DAY. NO PORTION OF THE TRENCH SHALL BE LEFT OPEN OVERNIGHT.

ALL COSTS ASSOCIATED WITH THESE REQUIREMENTS SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 614-MAINTENANCE OF TRAFFIC (LANES OPEN DURING HOLIAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS EVE	LABOR DAY
MEMORIAL DAY	THANKSGIVING DAY

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD.

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N Friday thru 6:00 AM Monday
MONDAY	12:00N Friday thru 6:00 AM Tuesday
TUESDAY	12:00N Monday thru 6:00 AM Wednesday
WEDNESDAY	12:00N Tuesday thru 6:00 AM Thursday
THURSDAY	12:00N Wednesday thru 6:00 AM Friday
THURSDAY (THANKSGIVING)	12:00N Wednesday thru 6:00 AM Monday
FRIDAY	12:00N Thursday thru 6:00 AM Monday
SATURDAY	12:00N Friday thru 6:00 AM Monday

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN THE MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$50 / MIN FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

ITEM 614, BARRIER REFLECTORS AND/OR OBJECT MARKERS

BARRIER REFLECTORS AND/OR OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE CONCRETE BARRIER USED FOR TRAFFIC CONTROL. BARRIER REFLECTORS, OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO CMS 626, EXCEPT THAT THE SPACING SHALL BE 50 FEET.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24” WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING APPROVED LIST FOR WORK ZONE ATTENUATORS. THE APPROVED LIST IS AVAILABLE AT THE “ROADWAY STANDARDS: PROPRIETARY ROADSIDE SAFETY DEVICES” WEB PAGE ON THE OFFICE OF ROADWAY ENGINEERING WEBSITE.

INSTALLATION SHALL BE AT THE LOATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY THE APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24” WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL) AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 622-PORTABLE CONCRETE BARRIER, 32”, AS PER PLAN (GEA-87-1.34)

THE FOLLOWING QUANTITY FOR ITEM 622, PORTABLE CONCRETE BARRIER, 32” APP, HAS BEEN ADDED FOR GEA-87-1.34 WHEN THE PARTIAL WIDTH CLOSURE SHIFTS TRAFFIC TO THE NORTH SIDE OF SR 87. THE PCB’S SHALL BE PLACED LONGITUDINALLY ALONG THE NORTH SIDE OF SR 87 OUTSIDE THE ROADWAY SHOULDER AS DIRECTED BY THE ENGINEER.

ITEM 622-PORTABLE CONCRETE BARRIER, 32” APP 300 FT.

ITEM 615, ROADS FOR MAINTAINING TRAFFIC (GEA-87-1.34)

THE FOLLOWING QUANTITES ARE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER FOR MAINTENANCE OF TRAFFIC.

ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	70 SQ. YD.
ROADS FOR MAINTAINING TRAFFIC	LUMP SUM

EARTHWORK FOR MAINTAINING TRAFFIC (GEA-87-1.34)

THE FOLLOWING QUANTITES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY.

EXCAVATION FOR MAINTAINING TRAFFIC	30 CU. YD. (SR 87)
EMBANKMENT FOR MAINTAINING TRAFFIC	0 CU. YD. (SR 87)

WHEN UNDERCUTS ARE NECESSARY FOR MAINLINE PAVEMENT OF EMBANKMENT CONSTRUCTION, EVALUATE THE NEED FOR TEMPORARY ROAD UNDERCUTS IF WITHIN A CLOSE PROXIMITY TO THE MAINLINE UNDERCUTS. A GEOTECHNICAL EVALUATION SHOULD BE CONSIDERED TO DETERMINE IF THE EXISTING SOIL CONDITIONS ARE ADEQUATE TO

SUPPORT THE TEMPORARY ROAD. ADDITIONAL SOIL BORINGS ALONG THE TEMPORARY ROAD ARE NOT NORMALLY REQUIRED.

DUST CONTROL (GEA-87-1.34)

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER	1M GAL.
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DUST CONTROL (CUY-252-3.10)

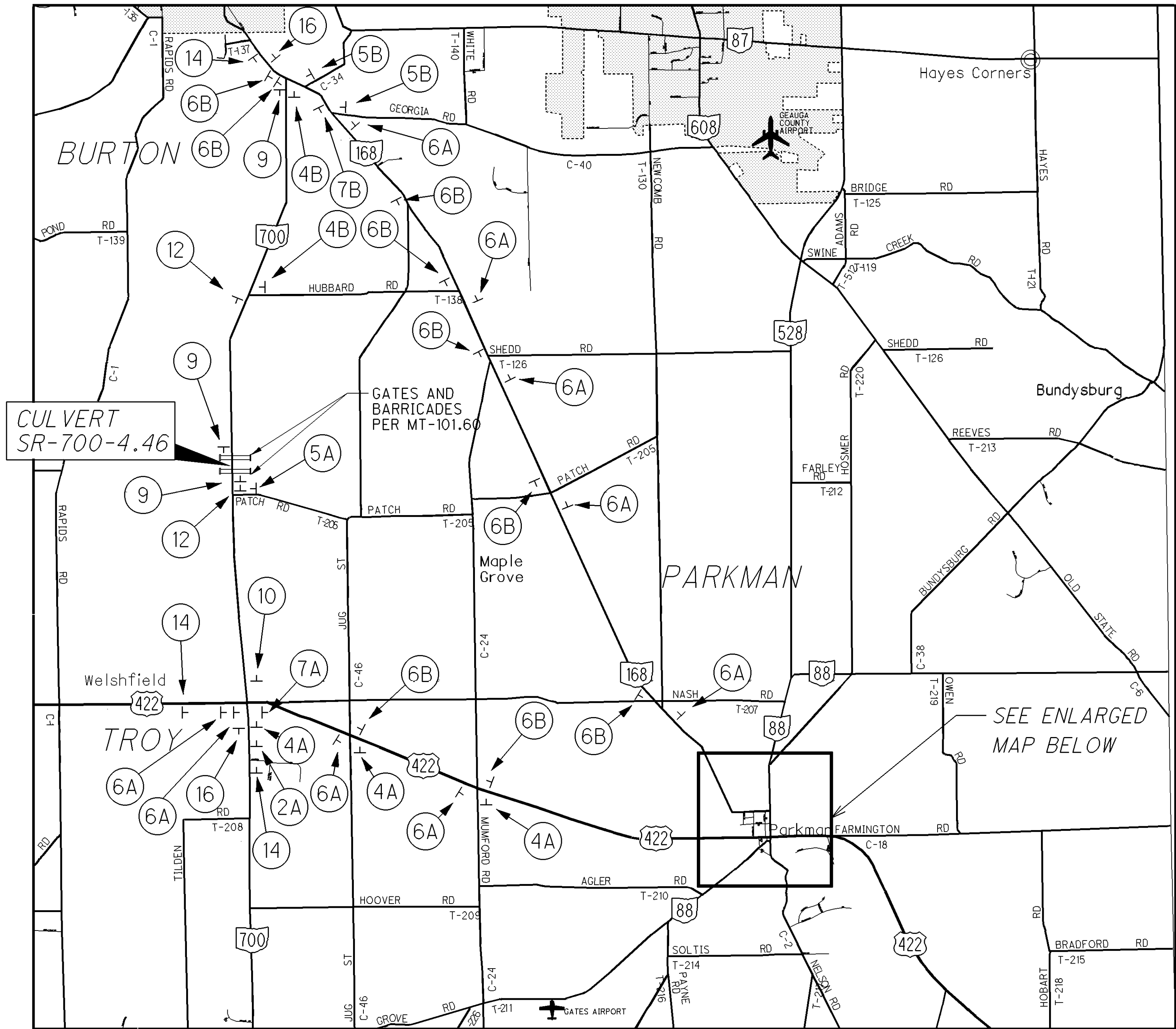
THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER	1M GAL.
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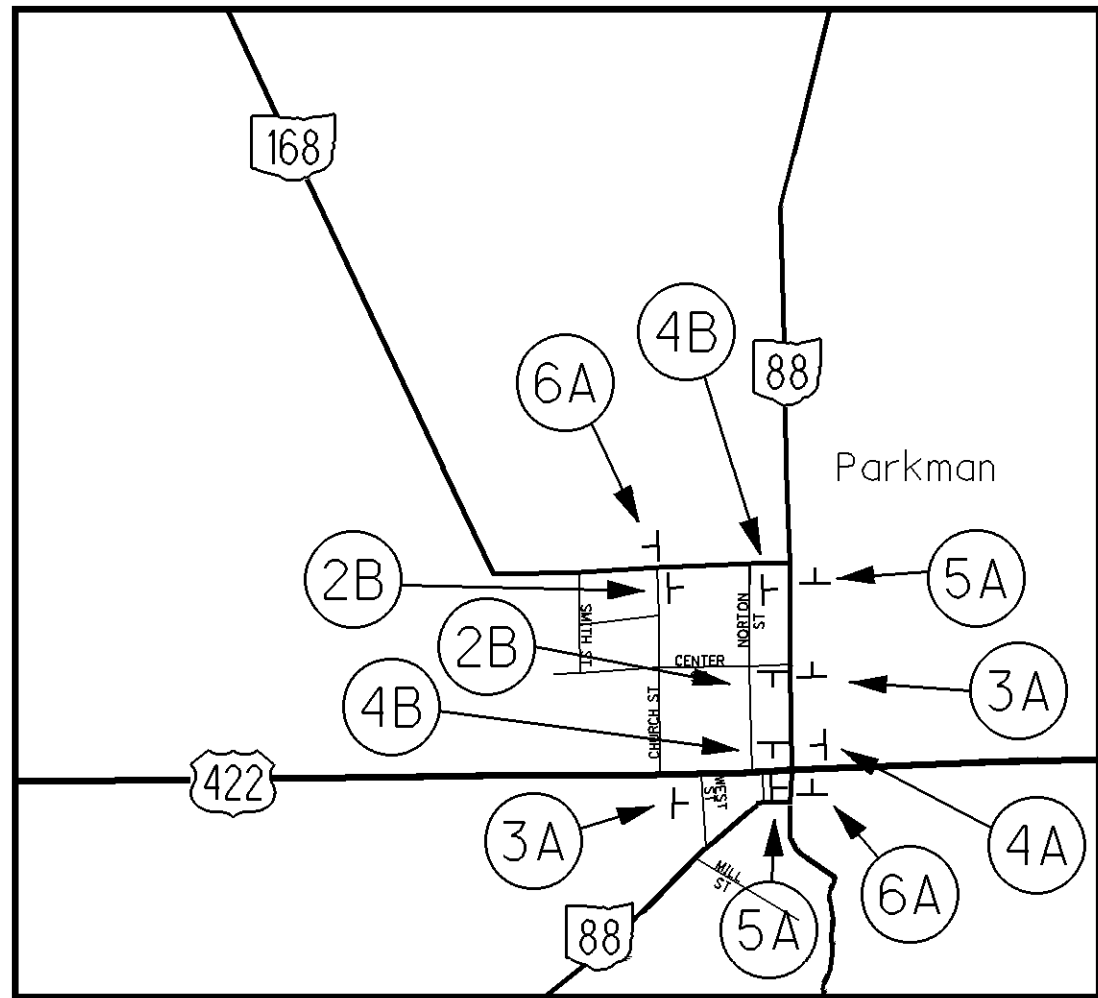
DUST CONTROL (GEA-700 4.46)

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER	1M GAL.
-----------------	---------



CULVERT
SR-700-4.46



NOT TO SCALE

1 DETOUR M4-8-24 700 M1-5-30-3	2 DETOUR M4-8-24 700 M1-5-30-3 M5-1R-21	3 DETOUR M4-8-24 700 M1-5-30-3 M5-1L-21	4 DETOUR M4-8-24 700 M1-5-30-3 M6-1R-21
5 DETOUR M4-8-24 700 M1-5-30-3 M6-1L-21	6 DETOUR M4-8-24 700 M1-5-30-3 M6-3-21	7 DETOUR M4-8-24 700 M1-5-30-3 M5-2R-21	8 DETOUR M4-8-24 700 M1-5-30-3 M5-2L-21
9 ROAD CLOSED 3 MILES AHEAD LOCAL TRAFFIC ONLY R11-3-60 DETOUR M4-10L-48	10 ROAD CLOSED 3 MILES AHEAD LOCAL TRAFFIC ONLY R11-3-60 DETOUR M4-10R-48	11 ROAD CLOSED AHEAD LOCAL TRAFFIC ONLY R11-3A-60	12 ROAD CLOSED 2 MILES AHEAD LOCAL TRAFFIC ONLY R11-3A-60
13 ROAD CLOSED R11-2-48 A NORTH M3-1-24	14 DETOUR AHEAD W20-2-36 B SOUTH M3-3-24	15 ROAD CLOSED AHEAD W20-3-36	16 END DETOUR M4-8A-24

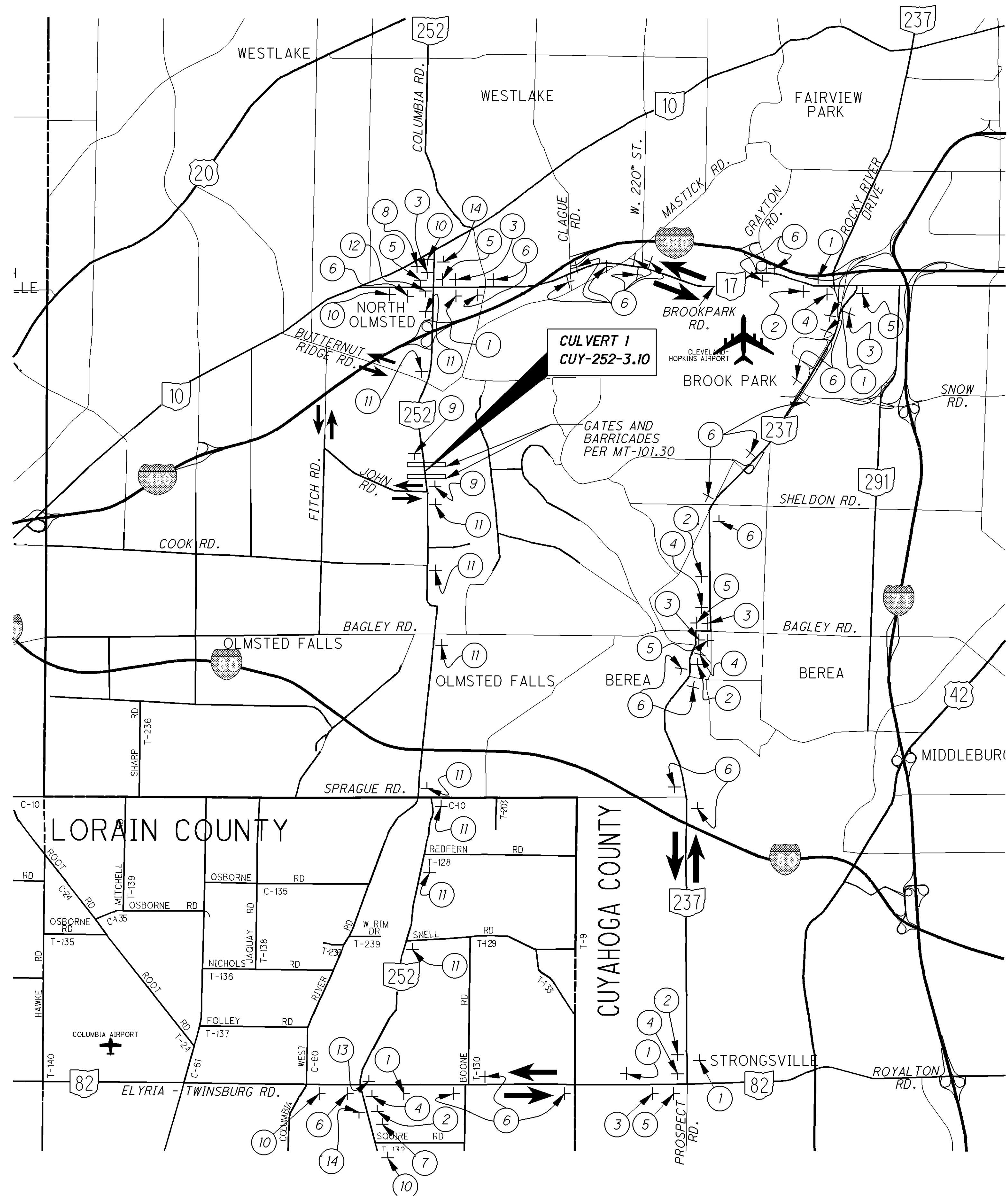
ITEM 614. MAINTAINING TRAFFIC (NOTICE OF CLOSURE)
NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS,
SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN
ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL
BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING
TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE
WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS.
ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF
CLOSURE.

S.R. 700 WILL BE
CLOSED XX-XX-XX
FOR X DAYS
OHIO DEPT. OF TRANSPORTATION

W20-H14-60

ITEM 614. MAINTAINING TRAFFIC
THE CONTRACTOR SHALL ERECT, MAINTAIN AND REMOVE THE
DETOUR. PAYMENT FOR ALL MATERIAL, LABOR, AND
EQUIPMENT TO PERFORM THIS WORK SHALL BE INCLUDED IN THE
LUMP SUM BID FOR ITEM 614-DETOUR SIGNING WHICH HAS BEEN
INCLUDED IN THE GENERAL SUMMARY.

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- 1 DETOUR
M4-8-24
252
MI-5-30-3
- 2 DETOUR
M4-8-24
252
MI-5-30-3
M5-1R-21
- 3 DETOUR
M4-8-24
252
MI-5-30-3
M5-1L-21
- 4 DETOUR
M4-8-24
252
MI-5-30-3
M6-1R-21
- 5 DETOUR
M4-8-24
252
MI-5-30-3
M6-1L-21

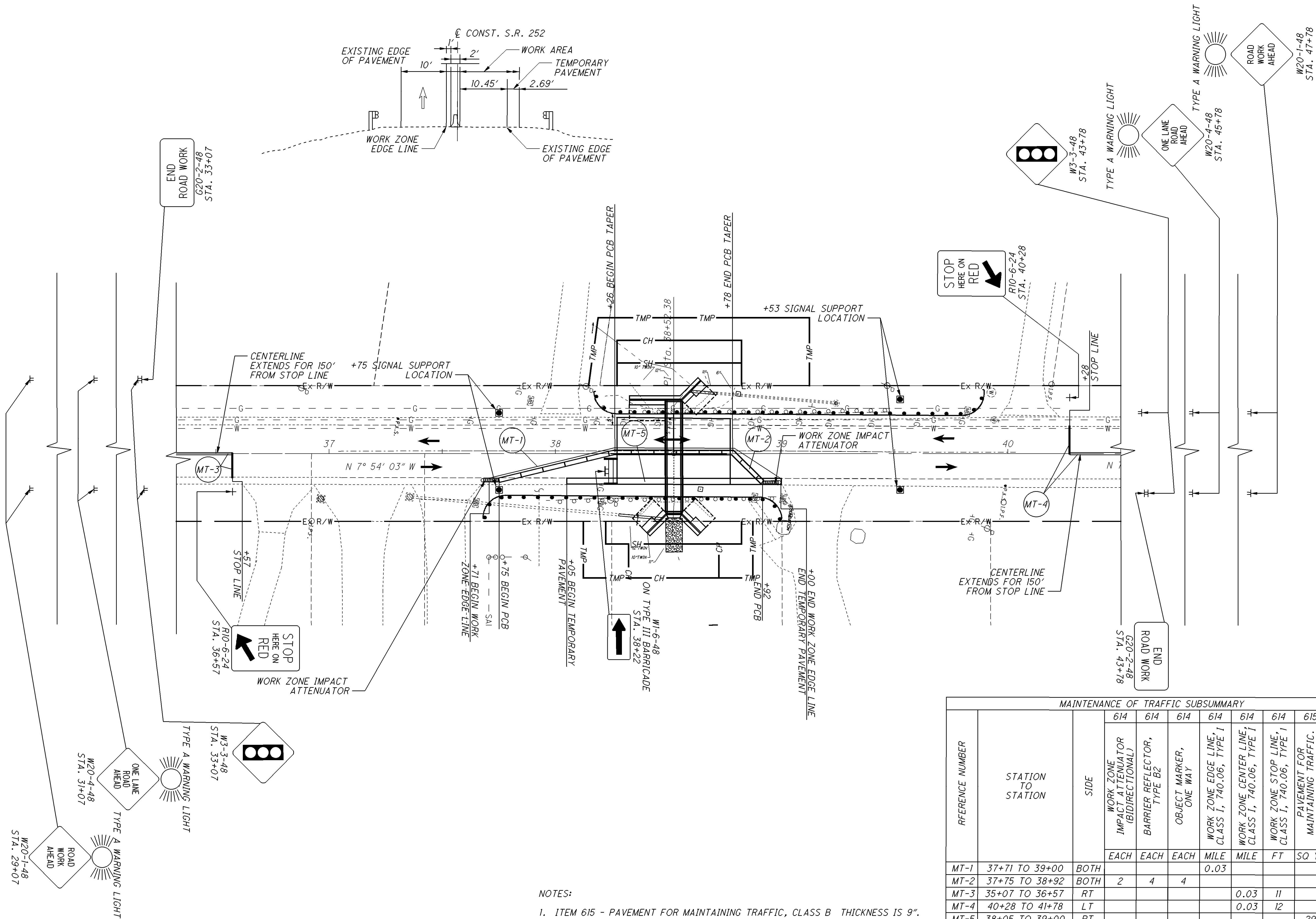
- 6 DETOUR
M4-8-24
252
MI-5-30-3
M6-3-21
- 7 ROAD CLOSED
6.0 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3A-60
DETOUR
M4-10R-48
- 8 ROAD CLOSED
1.6 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3A-60
DETOUR
M4-10L-48
- 9 ROAD CLOSED
R11-2-48

- TYPE A WARNING LIGHT
- 10 DETOUR AHEAD
W20-2-48
 - 11 ROAD CLOSED AHEAD
W20-3-48
 - 12 ROAD CLOSED
1.6 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3A-60
 - 13 ROAD CLOSED
6.0 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3A-60
 - 14 END DETOUR
M4-8A-24
- ➔ OFFICIAL DETOUR ROUTE
➡ LOCAL DETOUR ROUTE

ITEM 614, MAINTAINING TRAFFIC (NOTICE OF CLOSURE)
NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE.

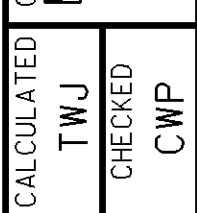
S.R. 252 WILL BE
CLOSED XX-XX-XX
FOR 4 DAYS
OHIO DEPT. OF TRANSPORTATION
W20-H14-60

ITEM 614, MAINTAINING TRAFFIC
THE CONTRACTOR SHALL ERECT, MAINTAIN AND REMOVE THE DETOUR. PAYMENT FOR ALL MATERIAL, LABOR, AND EQUIPMENT TO PERFORM THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614-DETOUR SIGNING WHICH HAS BEEN INCLUDED IN THE GENERAL SUMMARY.



NOTES:
1. ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B THICKNESS IS 9".

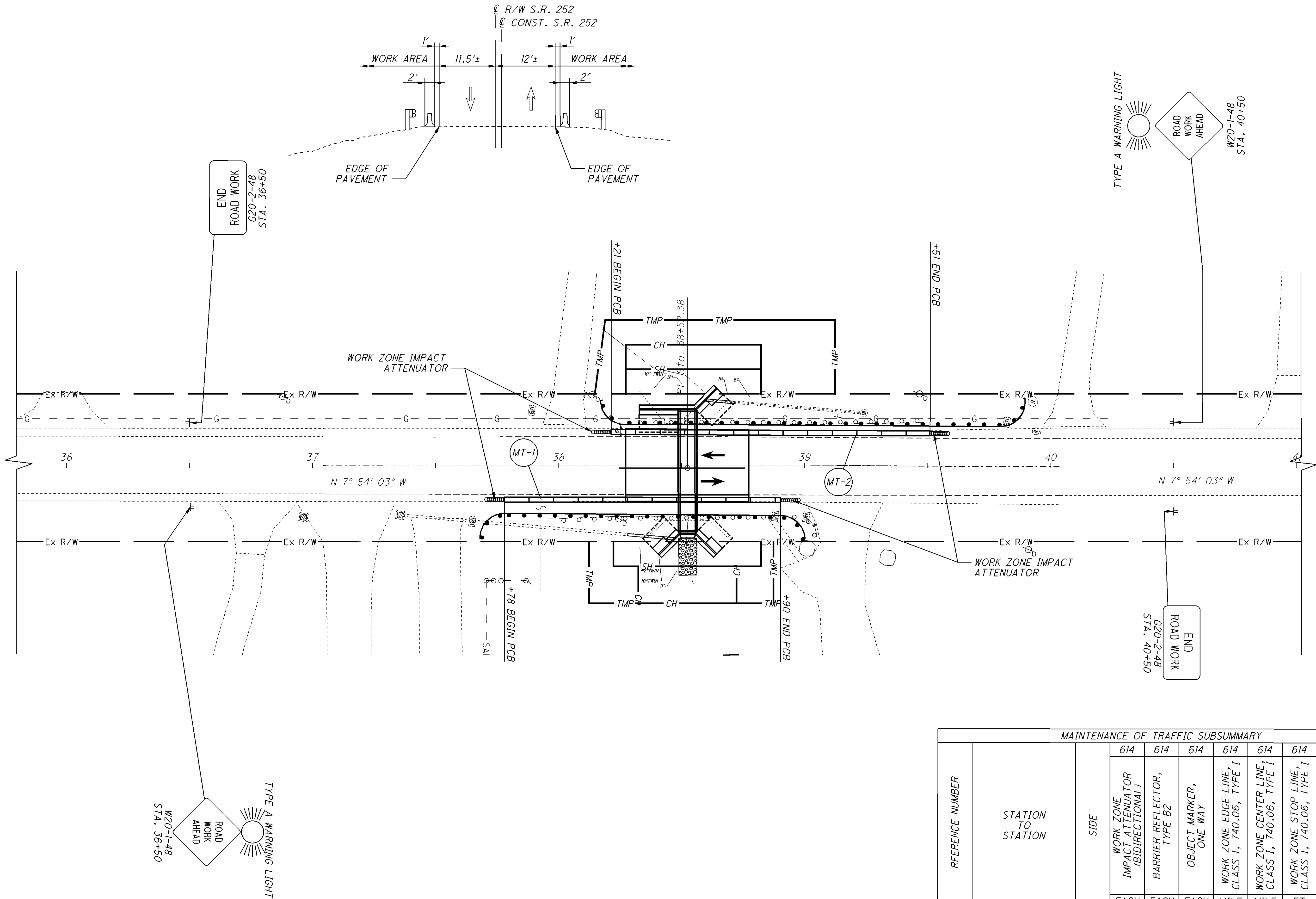
MAINTENANCE OF TRAFFIC SUBSUMMARY								
REFERENCE NUMBER	STATION TO STATION	SIDE	614	614	614	614	614	615
			WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	BARRIER REFLECTOR, TYPE B2	OBJECT MARKER, ONE WAY	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I
MT-1	37+71 TO 39+00	BOTH				0.03		
MT-2	37+75 TO 38+92	BOTH	2	4	4			
MT-3	35+07 TO 36+57	RT				0.03	11	
MT-4	40+28 TO 41+78	LT				0.03	12	
MT-5	38+05 TO 39+00	RT						29
TOTALS TO SHEET 11E			2	4	4	0.03	0.06	23
								124



CUY-252-03.10 / VAR

MAINTENANCE OF TRAFFIC SUBSUMMARY										
REFERENCE NUMBER	STATION TO STATION	SIDE	614	614	614	614	614	614		622
			WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	BARRIER REFLECTOR, TYPE B2	OBJECT MARKER, ONE WAY	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I		PORTABLE CONCRETE BARRIER, 32"
			EACH	EACH	EACH	MILE	MILE	FT		FT
MT-1	37+75 TO 39+00	BOTH				0.04				
MT-2	38+19 TO 39+84	BOTH	2	5	5					177
MT-3	35+07 TO 36+57	RT					0.03	11		
MT-4	40+27 TO 41+77	LT					0.03	12		
MT-5	38+05 TO 39+00	RT				0.02				
TOTALS TO SHEET IIE			2	5	5	0.06	0.06	23		177

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MAINTENANCE OF TRAFFIC SUBSUMMARY										
REFERENCE NUMBER	STATION TO STATION	SIDE	614	614	614	614	614	614	615	622
			WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	BARRIER REFLECTOR, TYPE B2	OBJECT MARKER, ONE WAY	WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE I	WORK ZONE CENTER LINE, CLASS 1, 740.06, TYPE I	WORK ZONE STOP LINE, CLASS 1, 740.06, TYPE I	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	PORTABLE CONCRETE BARRIER, 32"
			EACH	EACH	EACH	MILE	MILE	FT	SQ YD	FT
MT-1	37+78 TO 38+90	RT	2	4	4					112
MT-2	38+21 TO 39+51	LT	2	5	5					130
TOTALS THIS SHEET			4	9	9					242
TOTALS FROM SHEET (IIC)			2	4	4	0.03	0.06	23	29	124
TOTALS FROM SHEET (IID)			2	5	5	0.06	0.06	23		177
TOTALS TO GENERAL SUMMARY			8	18	18	0.09	0.12	46	29	543

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SHEET NUMBER									PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	8	10	14	15	15A	17	19									
LUMP											201	11000	LUMP		ROADWAY	
				2		1					202	20010	3	EACH	CLEARING AND GRUBBING	
						66					202	35101	66	FT	HEADWALL REMOVED	
				43							202	35201	43	FT	PIPE REMOVED, 24" AND UNDER, AS PER PLAN	6
					200	50	175				202	38000	425	FT	PIPE REMOVED, OVER 24", AS PER PLAN	6
					2						202	42000	2	EACH	GUARDRAIL REMOVED	
						LUMP					202	98000	LUMP		ANCHOR ASSEMBLY REMOVED, TYPE A	
															REMOVAL MISC.: GUARDRAIL & I-BEAM POSTS	
			0.77								209	60201	0.77	STATION	LINEAR GRADING, AS PER PLAN "A"	7
			5								209	60201	5	STATION	LINEAR GRADING, AS PER PLAN "B"	7
					32		20				209	70000	52	CU YD	BORROW	
					244	50	100				606	13000	394	FT	GUARDRAIL, TYPE 5	
					38						606	13050	38	FT	GUARDRAIL, TYPE 5A	
							75				606	17290	75	FT	GUARDRAIL, TYPE 5, LONG-SPAN	
					4						606	26500	4	EACH	ANCHOR ASSEMBLY, TYPE T	
															EROSION CONTROL	
				8.3							601	32104	8.3	CU YD	ROCK CHANNEL PROTECTION, TYPE B WITH FABRIC FILTER	
			222.7								659	00300	222.7	CU YD	TOPSOIL	
			2004								659	10000	2004	SQ YD	SEEDING AND MULCHING	
			0.18								659	20000	0.18	TON	COMMERCIAL FERTILIZER	
			0.42								659	31000	0.42	ACRE	LIME	
			5.42								659	35000	5.42	M GAL	WATER	
	6000										832	30001	6000	EACH	EROSION CONTROL, AS PER PLAN	8
						104					838	20750	104	CU YD	GABIONS WITH ADDITIONAL COATING	
															DRAINAGE	
						0.46					602	20000	0.46	CU YD	CONCRETE MASONRY	
				20							603	04601	20	FT	12" CONDUIT, TYPE C, AS PER PLAN	6
				13							603	06101	13	FT	15" CONDUIT, TYPE C, AS PER PLAN	6
						66					603	10201	66	FT	24" CONDUIT, TYPE A, AS PER PLAN	6
				50							603	93500	50	FT	6' X 3' CONDUIT, TYPE A, 706.05	
			146								613	41200	146	CU YD	LOW STRENGTH MORTAR BACKFILL	
															PAVEMENT	
			43								254	01000	43	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
			3								301	46000	3	CU YD	ASPHALT CONCRETE BASE, PG64-22	
			2								304	20000	2	CU YD	AGGREGATE BASE	
		32	5								407	10000	37	GALLON	TACK COAT	
			1								448	46020	1	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22	
			22								448	46061	22	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, AS PER PLAN	7
		18	2								448	47021	20	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, AS PER PLAN	7
			2								617	10100	2	CU YD	COMPACTED AGGREGATE	
															TRAFFIC CONTROL	
											642	00290	3.03	MILE	CENTER LINE	
			3	0.03							642	00090	0.06	MILE	EDGE LINE	
			0.06													
															LANDSCAPING	
5											661	40040	5	EACH	DECIDUOUS TREE, 1" CALIPER, RED MAPLE, ACER RUBRUM, BALLED/BURLAP	6
5											661	40040	5	EACH	DECIDUOUS TREE, 1" CALIPER, BLACK MAPLE ACER NIGRUM, BALLED/BURLAP	6
															RETAINING WALLS	
				LUMP		LUMP					503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING	
						1100					504	11100	1100	SQ FT	STEEL SHEET PILING LEFT IN PLACE (MIN. SEC MOD 9 CU-IN/FT)	

CALCULATED
MKM

CHECKED
MKM

GENERAL SUMMARY

CUY - 252 - 3.10 / VAR

12
35

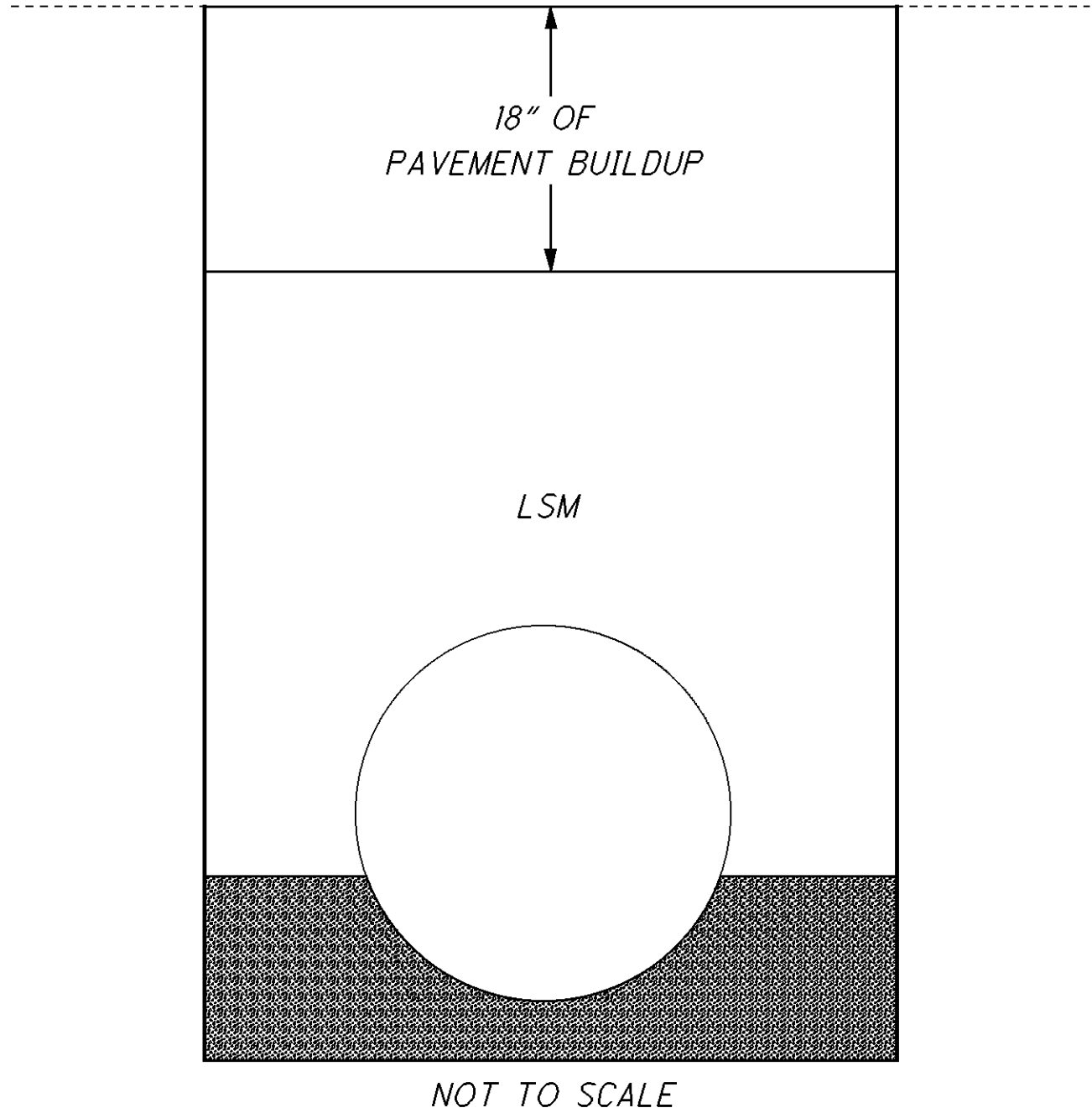
REVISED:03/29/12 DESCRIPTION: REMOVAL OF SHEET 20A QUANTITIES

<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; border-radius: 50%; padding: 5px; text-align: center;"> 13 35 </div> <div style="text-align: center;"> CUY - 252-3.10/ VAR </div> </div>	GENERAL SUMMARY	
	CALCULATED	
	MKM	
	CHECKED	
	MKM	

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LOCATION	STATION TO STATION		SIDE	LENGTH L	AVERAGE WIDTH W	SURFACE AREA A=L x W	AREAS BY CAD	209	209	254	301	304	407	448	448	448	617	642	642	613	
								LINEAR GRADING, AS PER PLAN "A"	LINEAR GRADING, AS PER PLAN "B"	PAVEMENT PLANING, ASPHALT CONCRETE (T=1 1/2")	ASPHALT CONCRETE BASE (T=9") PG64-22	AGGREGATE BASE	TACK COAT	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, APP	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, APP	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64- 22	COMPACTED AGGREGATE	CENTER LINE	EDGE LINE	LOW STRENGTH MORTAR BACKFILL	
								L	L	A	A x (9/12)	A x (6/12)	A x 0.10	A x (3.0/12)	A x (1.5/12)	A x (1.5/12)	A x (4/12)	L	L x 2	L x ABC	
	100 STATION	100 STATION						9 SY	27 CY	27 CY	9 GAL	27 CY	27 CY	27 CY	27 CY	5280 MILE	5280 MILE	27 CY			
	FROM	TO																			
CUY-252-3.10	38+27.38	38+48.38	CL	21	29.5	50.5			3	5.61			0.56	14.00	0.23			0.004	0.008		
	38+48.38	38+56.38	CL	8	29.5	37.5	330.4			4.17	1.04	0.69	0.42		0.17	0.17		0.002	0.003	97.90	
	38+56.38	38+77.38	CL	21	29.5	50.5				5.61			0.56		0.23			0.004	0.008		
GEA-87-1.34	70+64	70+82.5	CL	18.5	28	46.5		0.370		5.17			0.52		0.22		0.91	0.004	0.007		
	70+82.5	70+85.5	CL	3	28	31	237.07	0.030	0.030	3.44	0.86	0.57	0.34	0.22	0.14	0.14	0.07	0.001	0.001	26.34	
	70+85.5	71+04	CL	18.5	28	46.5		0.370		5.17			0.52		0.22		0.91	0.004	0.007		
GEA-700-4.46	13+46.29	13+63.29	CL	17	22	39			2	4.33			0.43	7.00	0.18			0.003	0.006		
	13+63.29	13+79.29	CL	16	22	38	29.34			4.22	1.06	0.70	0.42		0.18	0.18		0.003	0.006	22	
	13+79.29	13+96.29	CL	17	22	39				4.33			0.43		0.18			0.003	0.006		
TOTALS								0.770	5.030	42.06	2.96	1.97	4.21	21.22	1.75	0.49	1.90	0.03	0.053	146.24	
TOTALS CARRIED TO GENERAL SUMMARY								0.770	5	43	3	2	5	22	2	1	2	0.03	0.06	146	

PAVEMENT REPAIR DETAIL



LOCATION	STATION TO STATION		AREAS BY CAD	659	659	659	659	659
				SEEDING AND MULCHING	COMMERCIAL FERTILIZER	LIME	WATER	TOPSOIL
				<u>A</u> 9	<u>A x 0.00009</u> 9	<u>A</u> 43560	<u>A x 0.0027</u> 9	<u>A x 0.3333</u> 27
				SY	TON	ACRE	MGAL	CU YD
	FROM	TO						
CUY-252-3.10	38+27.38	38+77.38	6300	700.00	0.063	0.145	1.89	77.77
GEA-87-1.34	70+64	71+04	6890	765.56	0.069	0.158	2.07	85.05
GEA-700-4.46	13+46	13+96.29	4850	538.89	0.049	0.111	1.46	59.87
TOTALS				2004.44	0.180	0.414	5.41	222.69
TOTALS CARRIED TO GENERAL SUMMARY				2004	0.18	0.42	5.42	222.70

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HW-1 HW-2
SEE SHEETS 16,16A-16E
FOR HEADWALL DETAILS

DR-2
PROP. 13' VITRIFIED CLAY PIPE
STA 38+59.34, 27.65 LT
15" INVERT: 748.10
(STATION AND PIPE INVERT ELEVATION
ARE APPROXIMATE. THE CONTRACTOR
SHALL DETERMINE ACTUAL STATION AND
INVERT IN FIELD. COST TO BE INCLUDED
IN PERTINENT 603 PAY ITEM).

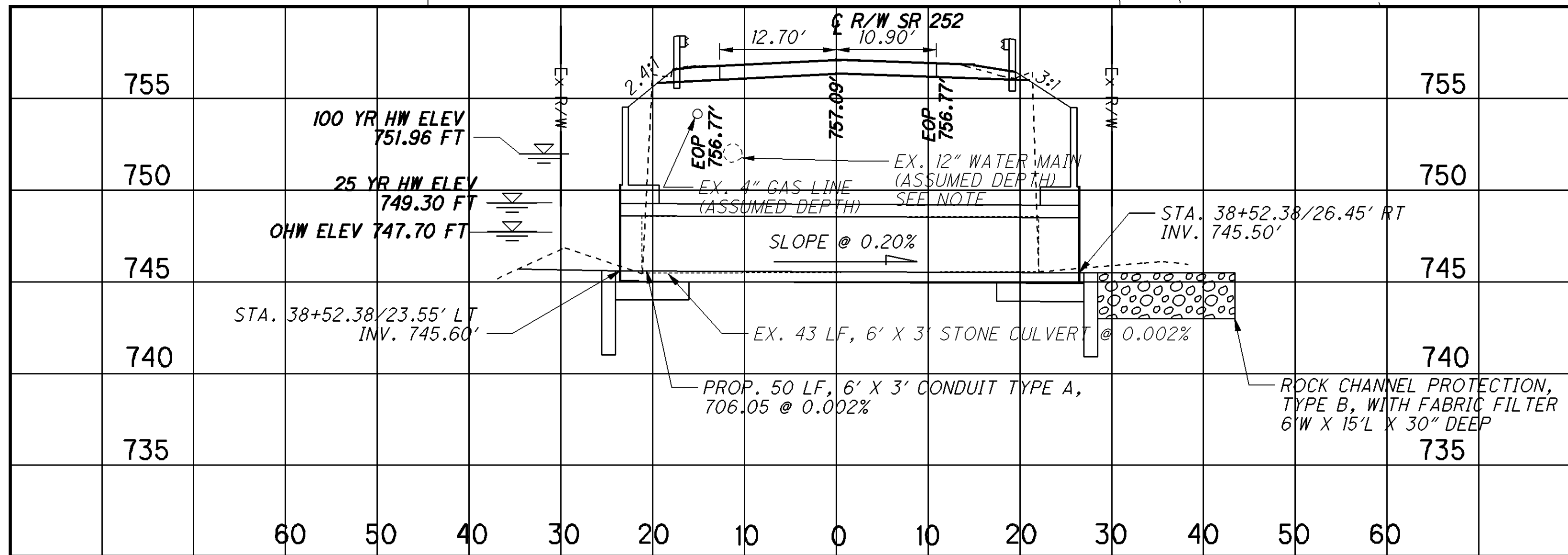
DR-3
PROP. 20' PVC PIPE
STA. 38+47.50, 28.72' RT
12" INVERT: 752.53'

NOTE:
WATER MAIN SHALL BE SUPPORTED
DURING CONSTRUCTION.
COST FOR MATERIALS AND LABOR
SHALL BE INCLUDED IN ITEM 603, 6' X 3'
CONDUIT, TYPE A

NOTES:
FOR BENCHMARK INFORMATION, SEE SHEET 9/35
FOR MAINTENANCE OF TRAFFIC INFORMATION, SEE SHEETS 11B-11E/35

EXISTING STRUCTURE	
TYPE: 6' X 3' STONE CULVERT	
SKEW: NONE	
ALIGNMENT: TANGENT	
PROPOSED STRUCTURE	
TYPE: 6' X 3' BOX, TYPE A, 706.05	
SKEW: NONE	
ALIGNMENT: TANGENT	
HYDRAULIC DESIGN DATA	
DRAINAGE AREA: 300.45 ACRES	
Q(25): 111.82 CFS	
HW(25): 749.30 FT	
V(25): 8.43 FT/S	
Q(100): 190.31 CFS	
HW(100): 751.96 FT	
V(100): 10.57 FT/S	
ORDINARY HIGH WATER MARK: 747.7 FT	

UNDERGROUND DRAINAGE
PIPE TO STORM LINE
(DO NOT DISTURB)
UNDERGROUND
SEPTIC LINES
(DO NOT DISTURB)
SEPTIC TANK
COVERS
SEPTIC
DOSING TANK
COVER
SAN



REF NO.	STATION		SIDE	GENERAL SUMMARY	
	FROM	TO		ITEM	QUANTITY
R-1	38+52.38	38+52.38	RT/LT	PIPE REMOVED, OVER 24" APP	43
DR-1	38+52.38	38+52.38	RT/LT	HEADWALL REMOVED	2
DR-2	38+59.85	38+71.85	LT	COFFERDAMS AND EXCAVATION BRACING	503
DR-3	38+46.82	38+66.82	RT	ROCK CHANNEL PROTECTION, TYPE B, WITH FABRIC FILTER	601
DR-4	38+52.38	38+52.38	RT	6' X 3' CONDUIT, TYPE C, APP	603
MB-1	38+88.05	39+00.64	RT	CONCRETE COLLAR AS PER DM 1.1	690
R-2	38+52.38	38+52.38	RT/LT	SPECIAL MAILBOX REMOVED AND RESET	2
TOTALS CARRIED TO GENERAL SUMMARY					

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DESIGN SPECIFICATIONS: THIS STANDARD DRAWING CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA: THE FOLLOWING DESIGN DATA IS ASSUMED:

INTERNAL ANGLE OF FRICTION = 30 DEGREES
COEFFICIENT OF FRICTION = 0.40
UNIT WEIGHT OF SOIL = 120 PCF
UNIT WEIGHT OF CONCRETE = 150 PCF
SLOPE OF BACKFILL = 2:1
MAXIMUM FOUNDATION BEARING PRESSURE = 3000 P.S.F.

CONCRETE CLASS HP - COMPRESSIVE STRENGTH 5000 PSI
(FOOTING, WINGWALL AND FORESLOPE WALL)

REINFORCING STEEL - ASTM A615, A616, OR A617
GRADE 60 MINIMUM YIELD STRENGTH
60,000 PSI (ALL REINFORCING SHALL BE EPOXY COATED)

BACKFILL LIMITATION: WHEN THE DESIGN HEIGHT IS GREATER THAN 10 FT, THE BACKFILL BEHIND THE WINGWALLS SHALL NOT BE PLACED HIGHER THAN THE ELEVATION OF THE SOIL ABOVE THE TOE. WHEN THE SOIL ABOVE THE TOE IS AT ITS FINISHED ELEVATION, THE REMAINDER OF THE BACKFILL MAY BE PLACED.

ITEM 530 STRUCTURE, MISC.: PRECAST CUTOFF WALLS, FOOTING SLABS, WEDGES AND FORESLOPE WALLS

FURNISH AND INSTALL PRECAST CUTOFF WALLS AND FOOTING SLABS AS SHOWN IN PLANS AND DETAILS.

MATERIALS TO CONSIST OF:
PRECAST REINFORCED CONCRETE PER CMS 706.051 EXCEPT THAT THE CONCRETE STRENGTH SHALL BE 5000 PSI AT 28 DAYS, THE DESIGN SHALL BE AS SHOWN IN THE PLANS, AND THE REQUIREMENT FOR DESIGN CALCULATIONS IS WAIVED.
REINFORCEMENT PER CMS 509
QUICK SETTING MORTAR, TYPE 1 PER CMS 705.21
QUICK SETTING MORTAR, TYPE 2 PER CMS 705.21
PREFORMED ELASTOMERIC JOINT SEAL FOR CONCRETE PER CMS 705.11

BASIS OF PAYMENT: ALL LABOR, EQUIPMENT, REINFORCING, MORTAR, AND INCIDENTALS REQUIRED TO CONSTRUCT THE FOOTINGS, CUTOFF WALL, WEDGES AND FORESLOPE WALL SHALL BE INCLUDED WITH ITEM 530-STRUCTURE, MISC.: PRECAST CUTOFF WALLS, FOOTING SLABS, AND FORESLOPE WALLS. 66 CU YD

ITEM 530 STRUCTURE, MISC.: REDI-ROCK RETAINING WALL
WALL UNITS SHALL BE "REDI-ROCK", OR EQUAL, AS PRODUCED BY MANUFACTURER.

CONTACT INFORMATION:
REDI-ROCK INTERNATIONAL
05481 US 31 SOUTH
CHARLEVOIX, MI 49720
PHONE: 886-222-8400
FAX: 231-237-9521
EMAIL: INFO@REDI-ROCK.COM
WEBSITE: WWW.REDI-ROCK.COM

THE CONTRACTOR SHALL SUBMIT WALL UNIT TEXTURE AND COLOR SAMPLES OF ITS PROPOSED WALL SYSTEM UNITS OR BLOCKS FOR REVIEW AND ACCEPTANCE PRIOR TO PROCUREMENT AND DELIVERY. THE RETAINING WALL SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE WALL SYSTEM MANUFACTURER'S INSTALLATION RECOMMENDATIONS AND SPECIFICATIONS.

THE CONTRACTOR MAY PROPOSE ALTERNATES TO THE SPECIFIED "REDI-ROCK" WALL UNITS AND WALL SYSTEM. DETAILED MATERIAL AND INSTALLATION SPECIFICATIONS, DESIGNS AND ASSOCIATED CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO PROCUREMENT AND DELIVERY. ALTERNATE DESIGNS AND CALCULATIONS SHALL BE PREPARED AND STAMPED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OHIO. ALTERNATES SHALL CONFORM TO THE SAME TYPE OF WALL AND REQUIREMENTS SPECIFIED IN THE CONTRACT FOR THE "REDI-ROCK" WALL UNITS AND WALL SYSTEM. ALTERNATES SHALL BE DESIGNED IN COMPLIANCE WITH THE REQUIREMENTS SPECIFIED IN THE AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS (AASHTO) LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION, DATED 2010.

GENERAL NOTES

THE FOLLOWING REDI-ROCK RETAINING WALL BLOCK QUANTITIES ARE LISTED BELOW FOR THE CONTRACTOR'S INFORMATION.

QUANTITIES TABLE		
ITEM	QUANTITY	UNIT
BB60	13	EA
HB41	16	EA
MB41	38	EA
HTCB	3	EA
TCB	6	EA
HTB28	5	EA
TB28	3	EA

SEE SHEET 476 FOR REDI-ROCK RETAINING WALL BLOCK CONFIGURATION. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL. ITEM 530 STRUCTURE MISC.: REDI-ROCK RETAINING WALL 415 SQ FT

WALL UNITS SHALL BE MADE WITH READY-MIXED CONCRETE IN ACCORDANCE WITH ASTM C94, LATEST REVISION, AND PER THE FOLLOWING CHART:

CLIMATE	AIR CONTENT	28-DAY COMPRESSIVE STRENGTH, PSI	SLUMP*
SEVERE	4 1/2%-7 1/2%	4000	5" ± 1 1/2"

* - HIGHER SLUMPS ARE ALLOWED IF ACHIEVED BY USE OF APPROPRIATE ADMIXTURES. NOTWITHSTANDING ANYTHING STATED ABOVE, ALL MATERIAL USED IN THE WALL UNITS MUST MEET APPLICABLE ASTM AND LOCAL REQUIREMENTS FOR EXTERIOR CONCRETE.

WALL UNIT INSTALLATION:
ALLOWABLE CONSTRUCTION TOLERANCE AT THE WALL FACE IS 2-DEGREES VERTICALLY, AND 1 INCH IN 10 FEET HORIZONTALLY.

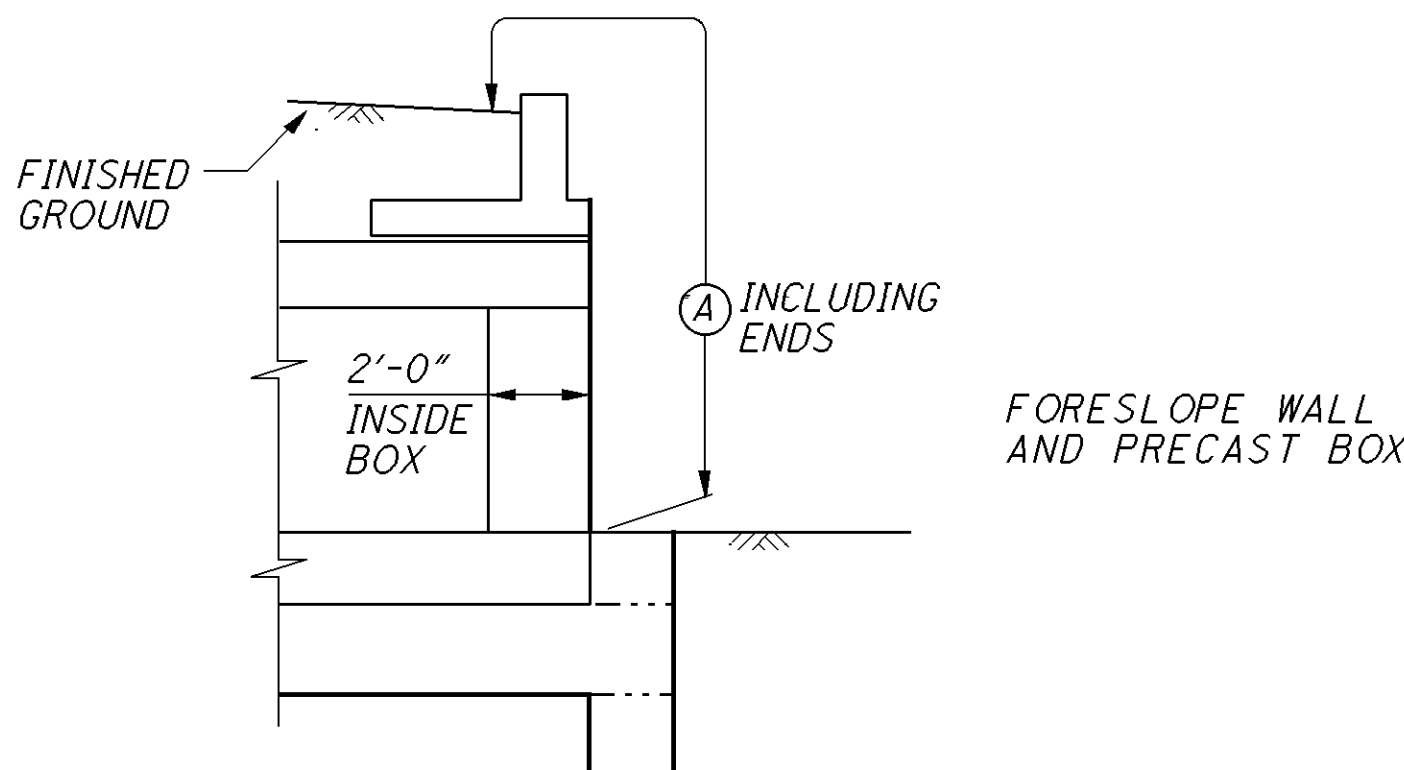
CONTRACTOR TO FOLLOW ALL MANUFACTURER'S INSTALLATION GUIDELINES.

POROUS BACKFILL WITH FILTER FABRIC SHALL BE PLACED BEHIND THE WINGWALLS AND FORESLOPE WALL AND SHALL EXTEND TO 12" BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6" ABOVE THE TOP ELEVATION OF THE UNDERDRAIN.

UNDERDRAIN SHALL BE PLACED 6" TO 12" ABOVE THE NORMAL WATER ELEVATION OR GROUND LINE. UNDERDRAIN SHALL BE PLACED AS DIRECTED BY THE ENGINEER AND OUTLET ON EITHER SIDE OF THE WINGWALLS.

PREFORMED EXPANSION JOINT FILLER: PREFORMED EXPANSION JOINT FILLER (PEJF) CONFORMING TO CMS 705.03, 1 INCH THICK, SHALL BE PLACED ABOVE THE FOOTING BETWEEN THE SIDES OF THE BOX CULVERT AND THE ENDS OF THE WINGWALLS. PAYMENT FOR MATERIALS AND INSTALLATION SHALL BE INCLUDED WITH ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER.

SEALING OF FORESLOPE WALL: ALL EXPOSED FORESLOPE WALL AND WINGWALL CONCRETE SHALL BE SEALED WITH EPOXY-URETHANE SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DIAGRAMS BELOW. PAYMENT FOR THE EPOXY-URETHANE SEALER SHALL BE PER ITEM 512 - SEALING OF CONCRETE SURFACES.

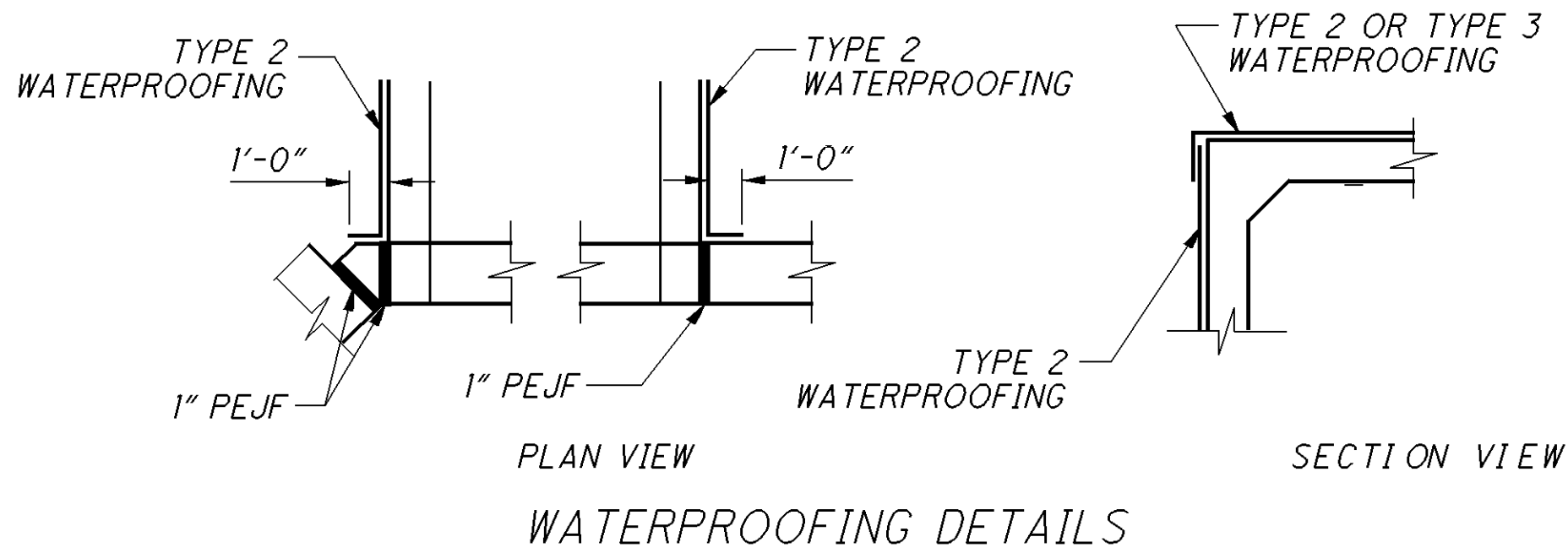


LIMITS OF ITEM 512-SEALING CONCRETE SURFACES

(A) - SEAL ENTIRE CONCRETE SURFACE AREA

WATERPROOFING: TYPE 2 WATERPROOFING, PER CMS 512.09 AND 711.25, SHALL EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING.

TYPE 2 WATERPROOFING, PER CMS 512.09 AND 711.25 SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING.



ITEM 518 - STRUCTURAL DRAINAGE:

4" PERFORATED CORRUGATED PLASTIC PIPE WITH SOCK TO BE PLACED LONGITUDINALLY BEHIND WINGWALL TO PROVIDE POSITIVE DRAINAGE OF BACKFILL MATERIAL LOCATED BEHIND WALL AS SHOWN ON SHEET 476.

4" NON-PERFORATED CORRUGATED PLASTIC PIPE TO BE PLACED FROM END OF THE WINGWALLS TO AN OUTLET POINT AS DIRECTED BY ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 518 STRUCTURE DRAINAGE MISC.: 4" PERFORATED CORRUGATED PLASTIC PIPE WITH SOCK 53 FT

ITEM 518 4" NON-PERFORATED CORRUGATED PLASTIC PIPE INCLUDING SPECIALS 67 FT

ITEM 512 - SEALING OF CONCRETE SURFACES (NON-EPOXY), AS PER PLAN: APPLY TO SURFACE FACE OF RETAINING WALL MASONRY UNITS IN ACCORDANCE WITH MASONRY WALL UNIT MANUFACTURER'S RECOMMENDATIONS.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 512 SEALING OF CONCRETE SURFACES (NON-EPOXY), AS PER PLAN 48 SQ YD

ESTIMATED QUANTITIES				
ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION
503	21300	LUMP		UNCLASSIFIED EXCAVATION
509	10000	4197	POUND	EPOXY COATED REINFORCING STEEL
512	10000	15	SQ YD	SEALING OF CONCRETE SURFACES
512	10051	48	SQ YD	SEALING OF CONCRETE SURFACES (NON-EPOXY), AS PER PLAN
512	33000	100	SQ YD	TYPE 2 WATERPROOFING
516	13600	42	SQ FT	1" PREFORMED EXPANSION JOINT FILLER
518	21230	LUMP		POROUS BACKFILL WITH FILTER FABRIC
518	62100	53	FT	STRUCTURE DRAINAGE MISC.: 4" PERFORATED CORRUGATED PLASTIC PIPE WITH SOCK
518	39900	67	FT	4" PERFORATED CORRUGATED PLASTIC PIPE INCLUDING SPECIALS
530	00600	415	SQ FT	SPECIAL - STRUCTURE MISC.: REDI-ROCK RETAINING WALL
530	01100	66	CU YD	SPECIAL - STRUCTURE MISC.: PRECAST CUT-OFF WALLS, FOOTING SLAB AND FORESLOPE WALLS

QUANTITIES CARRIED TO GENERAL SUMMARY

CALCULATED
AJM
CHECKED
CWF

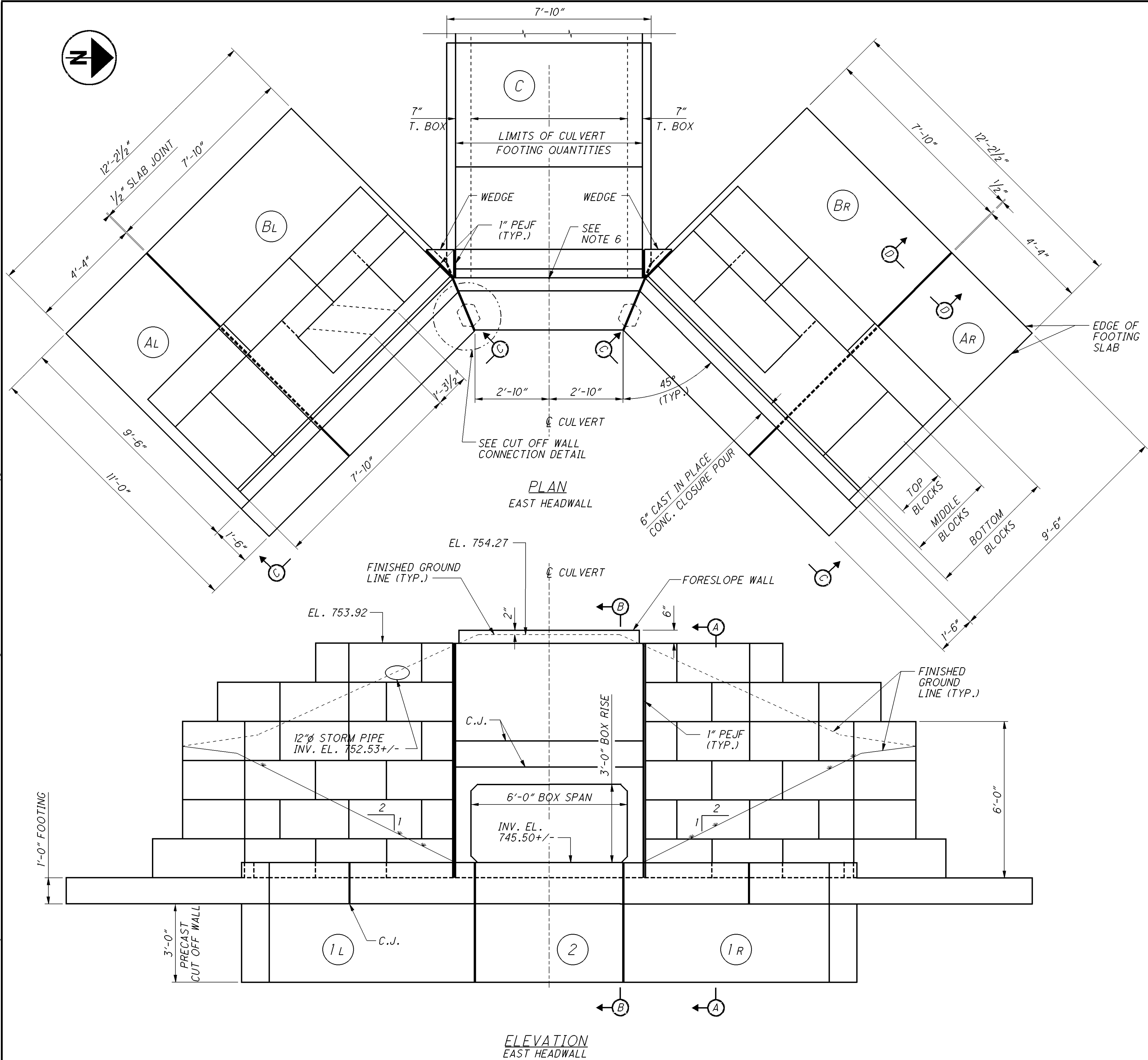
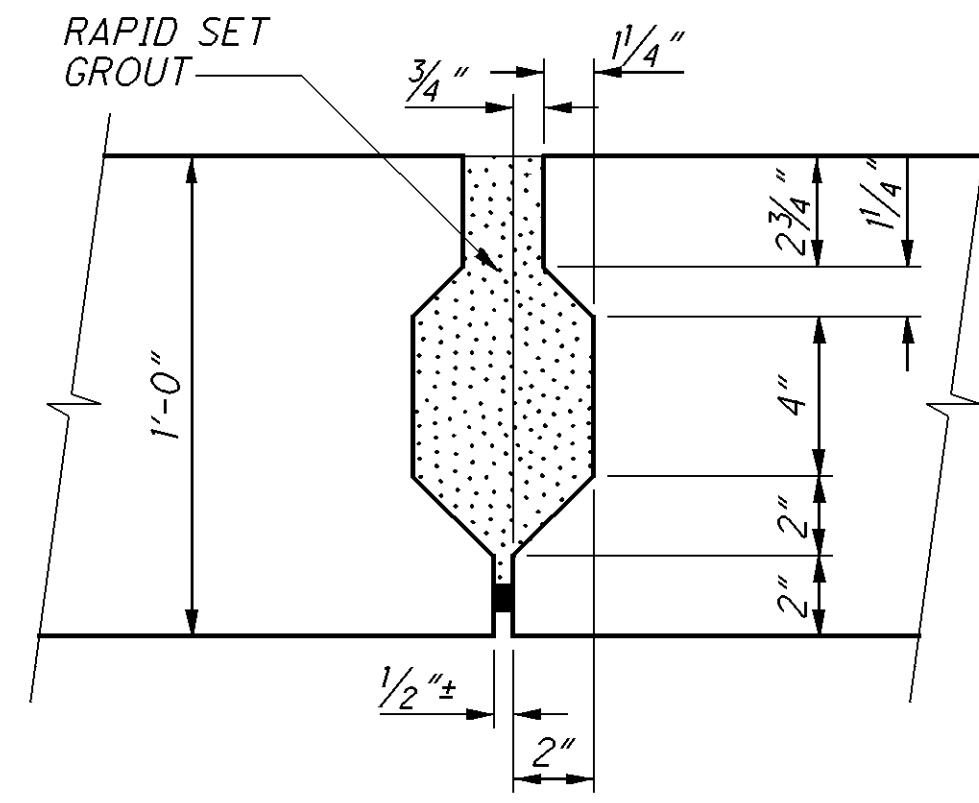
HEADWALLS FOR PRECAST BOX CULVERT
CUY - 252 - 03.10

CUY - 252 - 03.10/ VAR

1 / 6

16
35

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FOOTING SLAB JOINT DETAIL
SECTION D-D

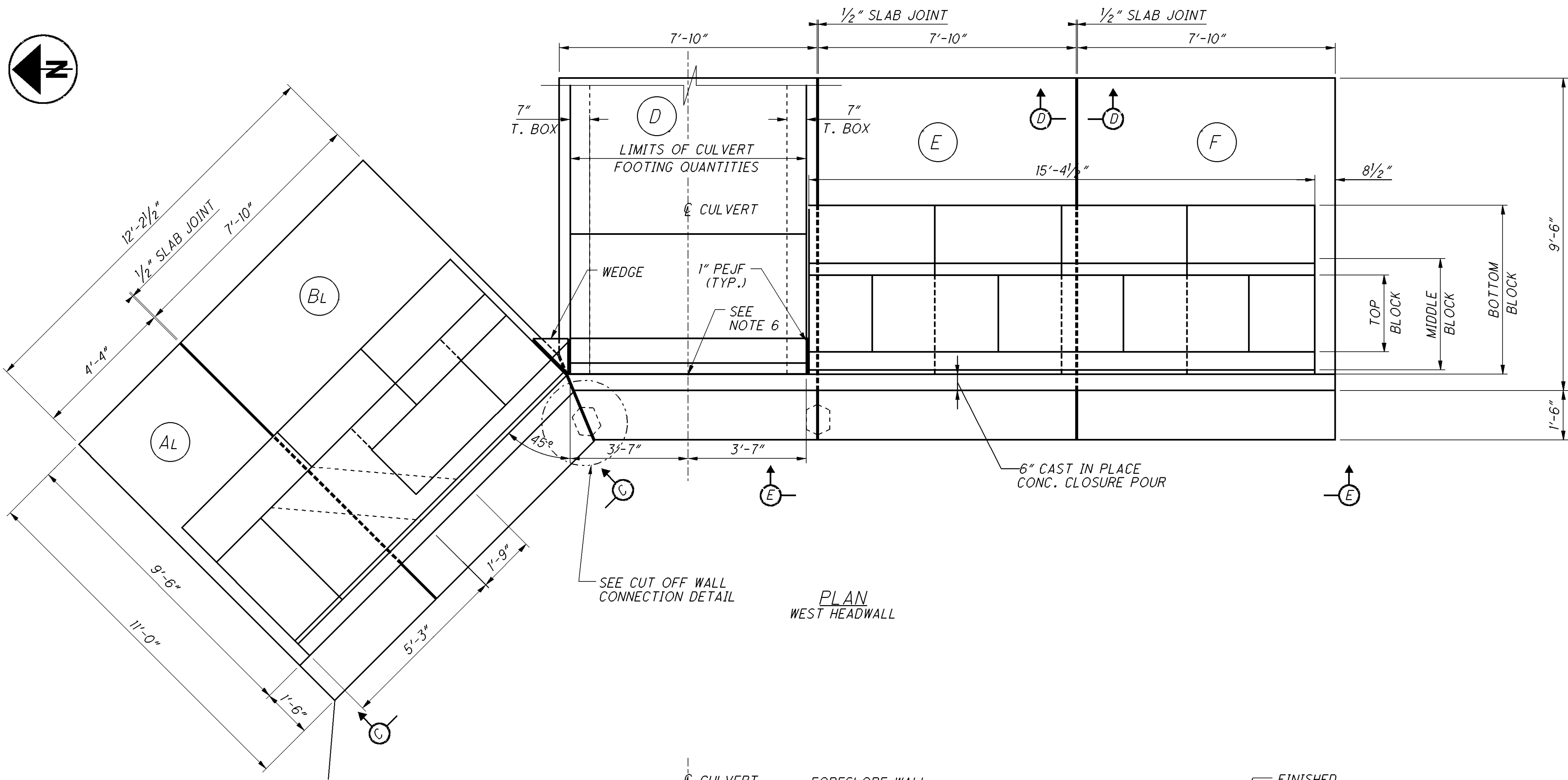
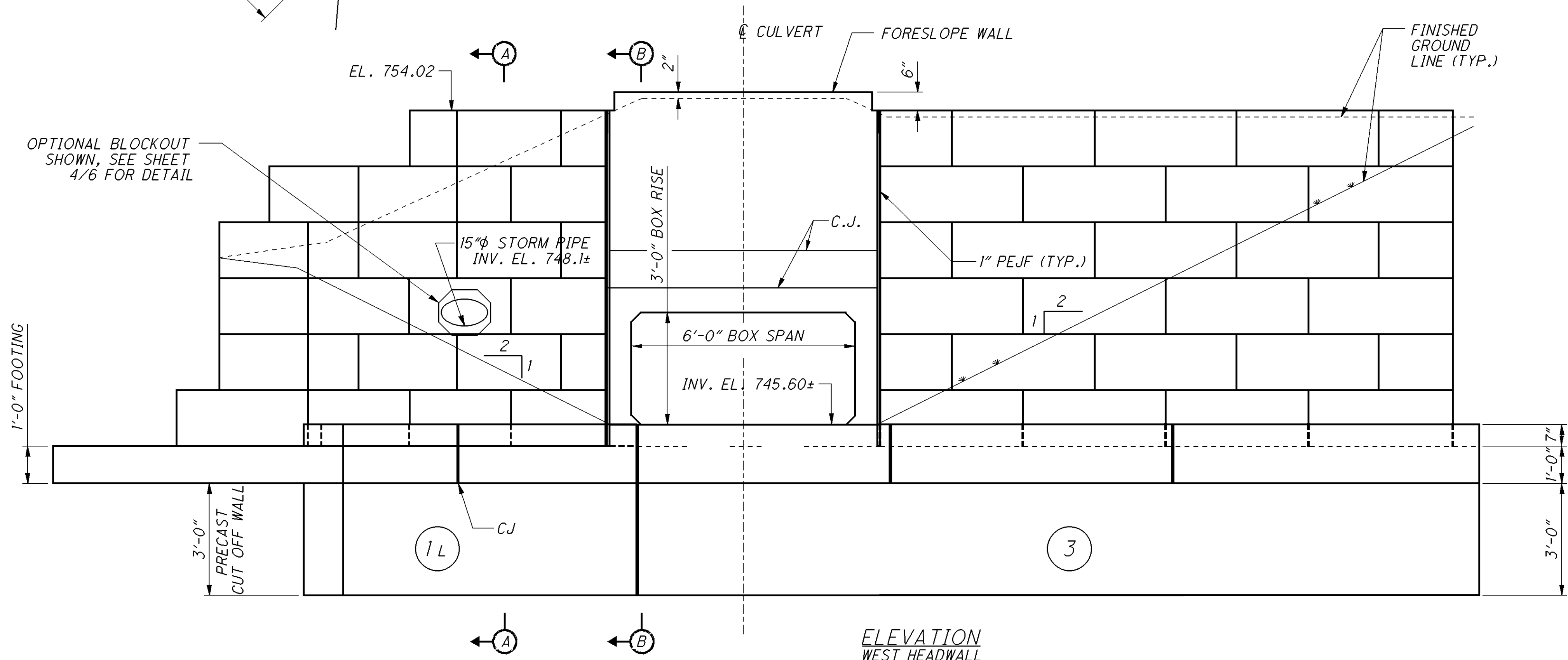
LEGEND

- | | |
|--------|-------------------------------------|
| (AR) | FOOTING SLAB PANEL
(NOTE 2) |
| (1R) | CUT OFF WALL SLAB
(NOTE 2) |
| C.J. | CONSTRUCTION JOINT |
| CL. | CLEAR |
| CONC. | CONCRETE |
| DIA. | DIAMETER |
| DIM. | DIMENSION |
| EXTN. | EXTENSION |
| E.F. | EACH FACE |
| F.F. | FAR FACE |
| MAX. | MAXIMUM |
| MIN. | MINIMUM |
| N.F. | NEAR FACE |
| PEJF | PREFORMED EXPANSION
JOINT FILLER |
| QTY. | QUANTITY |
| REINF. | REINFORCING |
| SER. | SERIES |
| SHT. | SHEET |
| SPA. | SPACING |
| T&B | TOP AND BOTTOM |
| TYP. | TYPICAL |

NOTES

1. FOR SECTIONS A-A, B-B AND VIEW C-C, SEE SHEET 4/6.
2. FOR FOOTING SLAB DETAILS, SEE SHEET 4/6 AND 5/6.
3. FOR FORESLOPE WALL REINFORCING AND QUANTITIES, SEE SHEET 4/6 AND 6/6 RESPECTIVELY.
4. POROUS BACKFILL NOT SHOWN FOR CLARITY.
5. FOR CUTOFF WALL CONNECTION DETAIL SEE SHEET 5/6.
6. THE STATION AND OFFSET WITH RESPECT TO THE CENTERLINE OF SURVEY SHALL BE SHOWN ON THE PLANS.
7. CONTRACTOR TO VERIFY 12" STORM PIPE INVERT ELEVATION.
8. SEE SHEET 6/6 FOR REINFORCING SCHEDULE.

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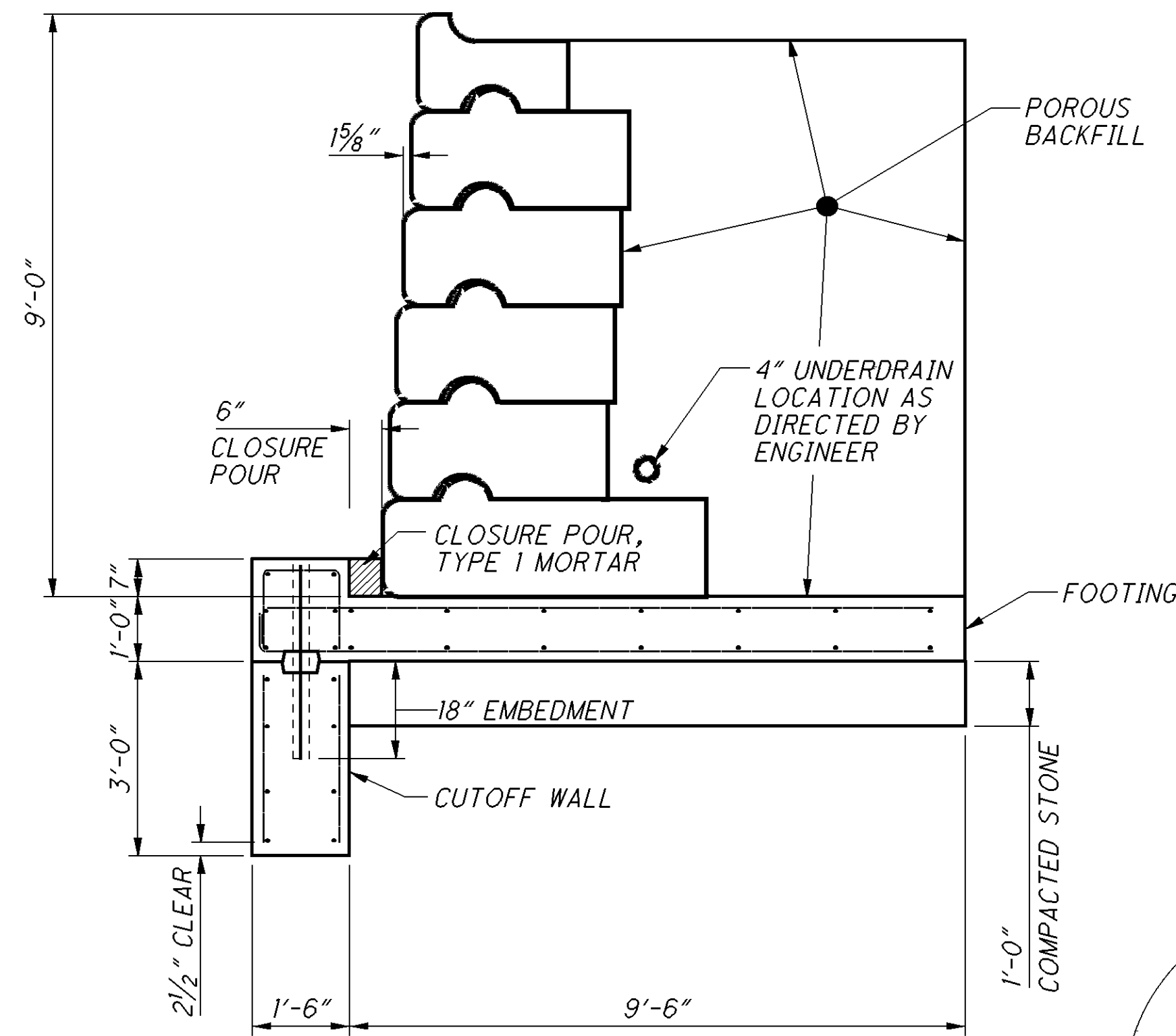
LEGEND

AR	FOOTING SLAB PANEL (NOTE 2)
IR	CUT OFF WALL SLAB (NOTE 2)
C.J.	CONSTRUCTION JOINT
CLR.	CENTER LINE
CLR.	CLEAR
CONC.	CONCRETE
DIA.	DIAMETER
DIM.	DIMENSION
EXTN.	EXTENSION
E.F.	EACH FACE
F.F.	FAR FACE
MAX.	MAXIMUM
MIN.	MINIMUM
N.F.	NEAR FACE
PEJF	PREFORMED EXPANSION JOINT FILLER
QTY.	QUANTITY
REINF.	REINFORCING
SER.	SERIES
SHT.	SHEET
SPA.	SPACING
T&B	TOP AND BOTTOM
TYP.	TYPICAL

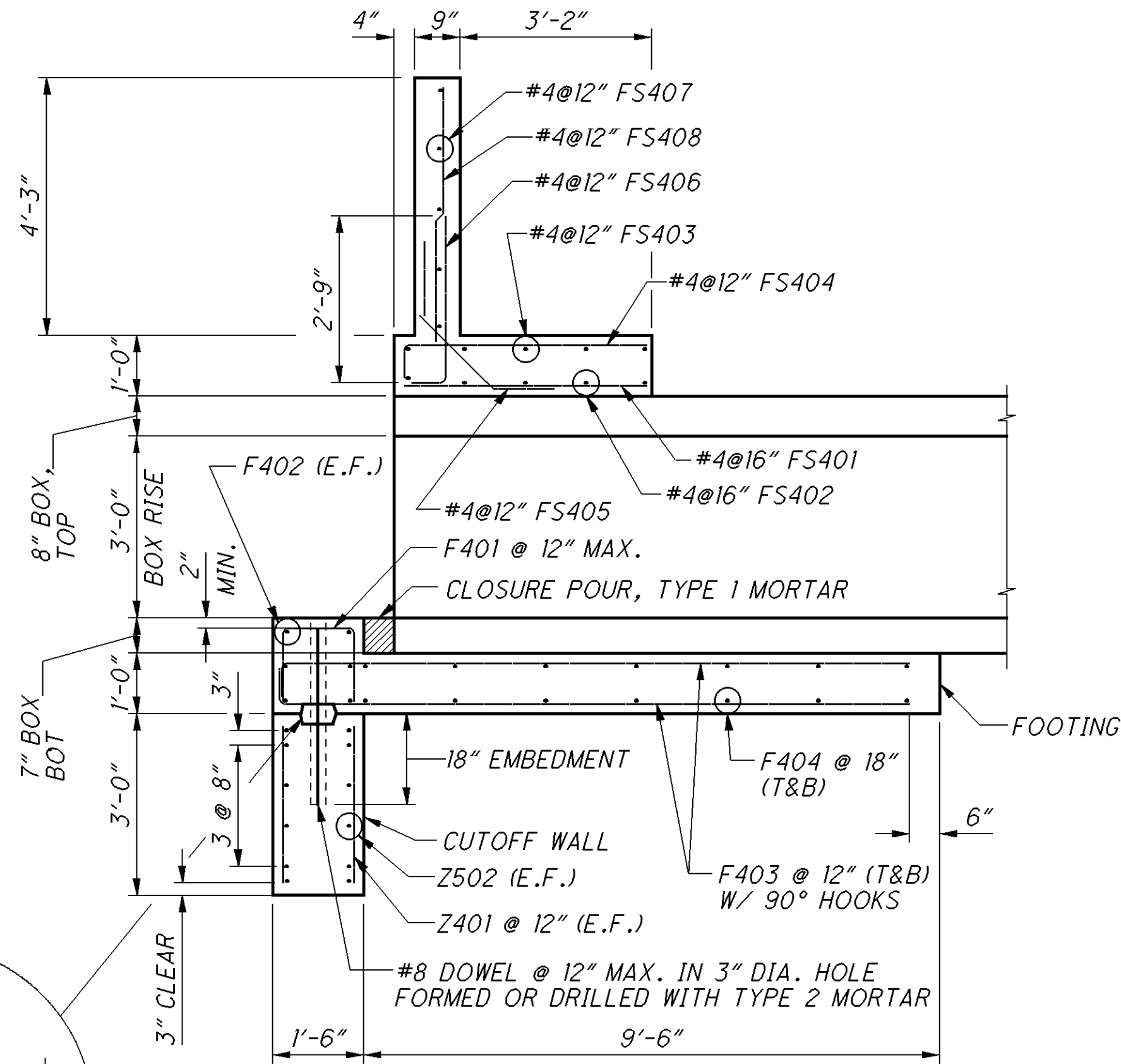
NOTES

- FOR SECTIONS A-A, B-B AND VIEWS C-C AND E-E, SEE SHEET 4/6.
- FOR FOOTING SLAB DETAILS, SEE SHEET 4/6 AND 5/6. FOR SLAB JOINT DETAIL SECTION D-D SEE SHEET 2/6.
- FOR FORESLOPE WALL REINFORCING AND QUANTITIES, SEE SHEET 4/6 AND 6/6 RESPECTIVELY.
- POROUS BACKFILL NOT SHOWN FOR CLARITY.
- FOR CUTOFF WALL CONNECTION DETAIL SEE SHEET 5/6.
- THE STATION AND OFFSET WITH RESPECT TO THE CENTERLINE OF SURVEY SHALL BE SHOWN ON THE PLANS.
- CONTRACTOR TO VERIFY 15" STORM PIPE INVERT ELEVATION.
- SEE SHEET 6/6 FOR REINFORCING SCHEDULE.

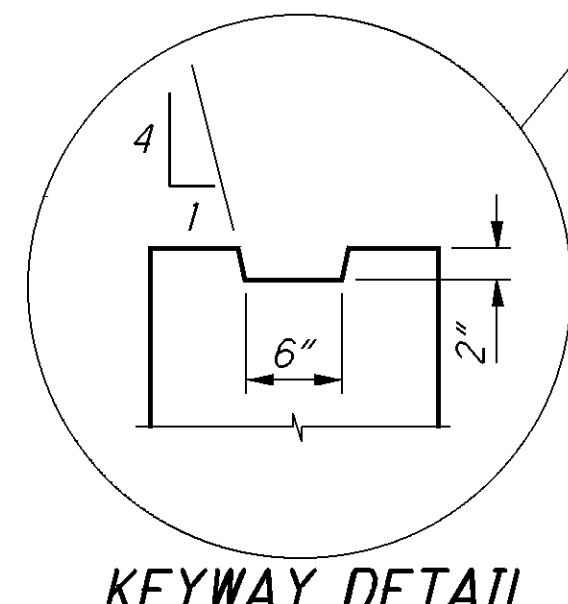
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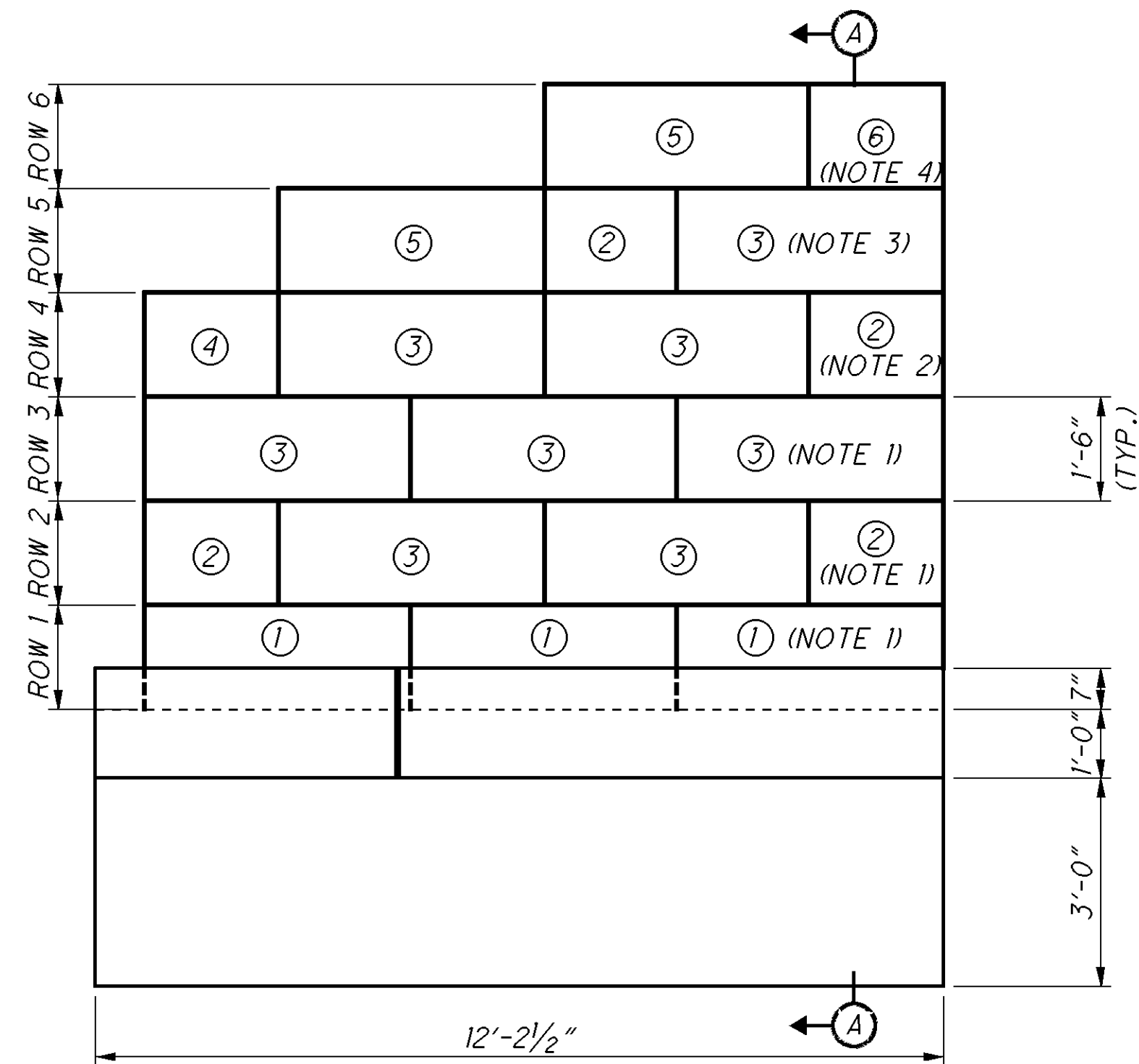
SECTION A-A



SECTION B-B
(CULVERT INLET BEVEL SHOWN)



KEYWAY DETAIL



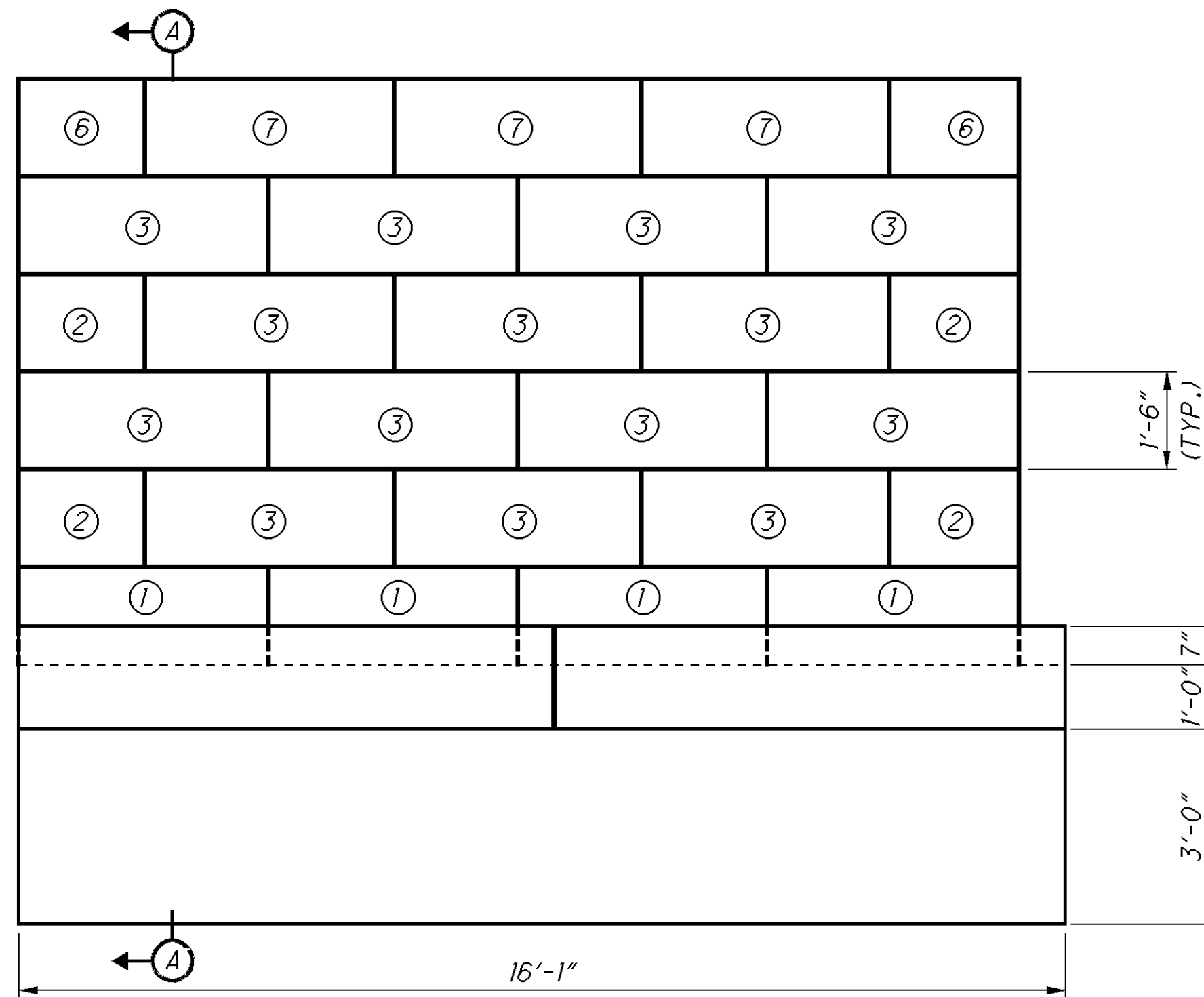
VIEW C-C
SE WINGWALL SHOWN
NE WINGWALL OPPOSITE HAND, SIMILAR
NW SIMILAR

LEGEND

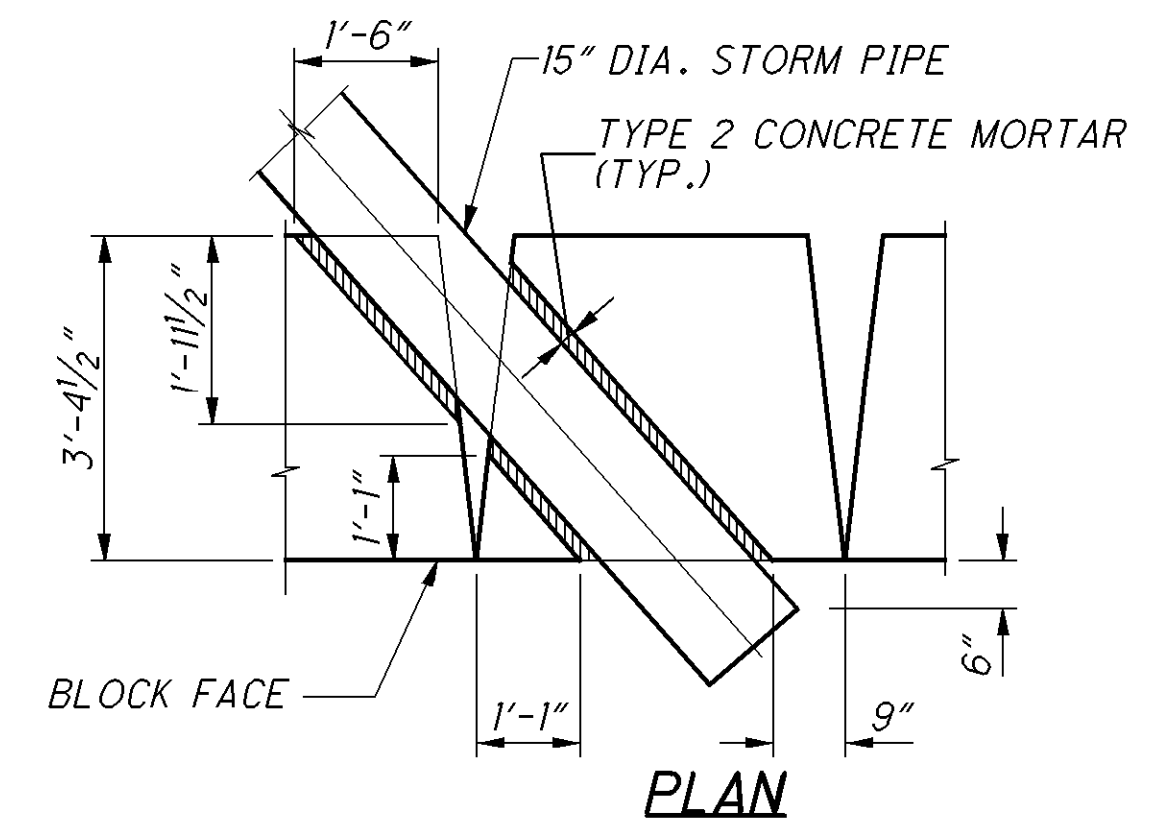
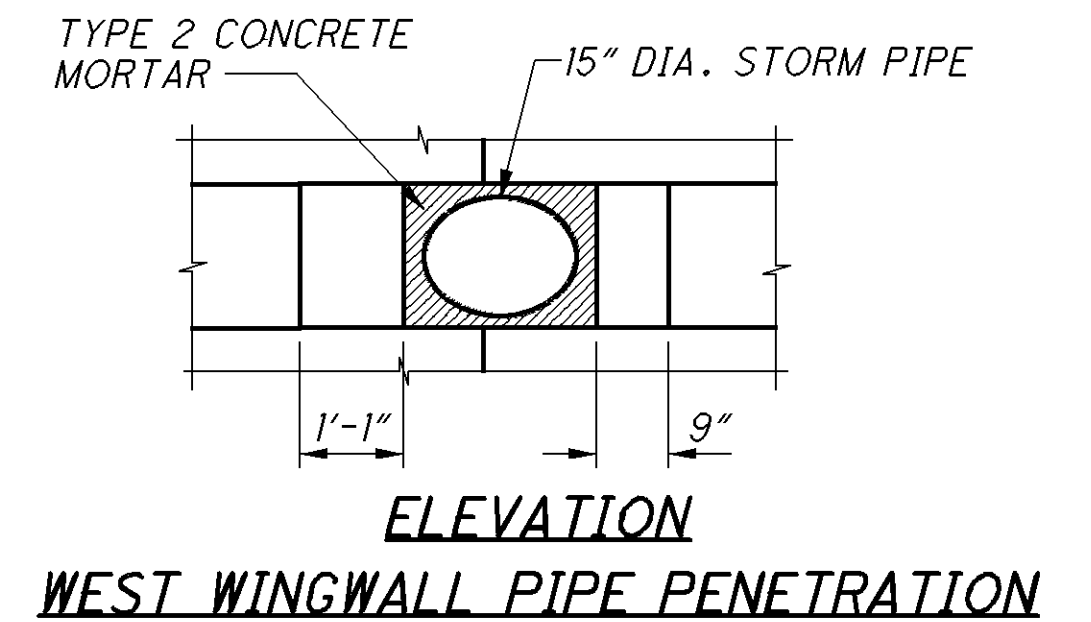
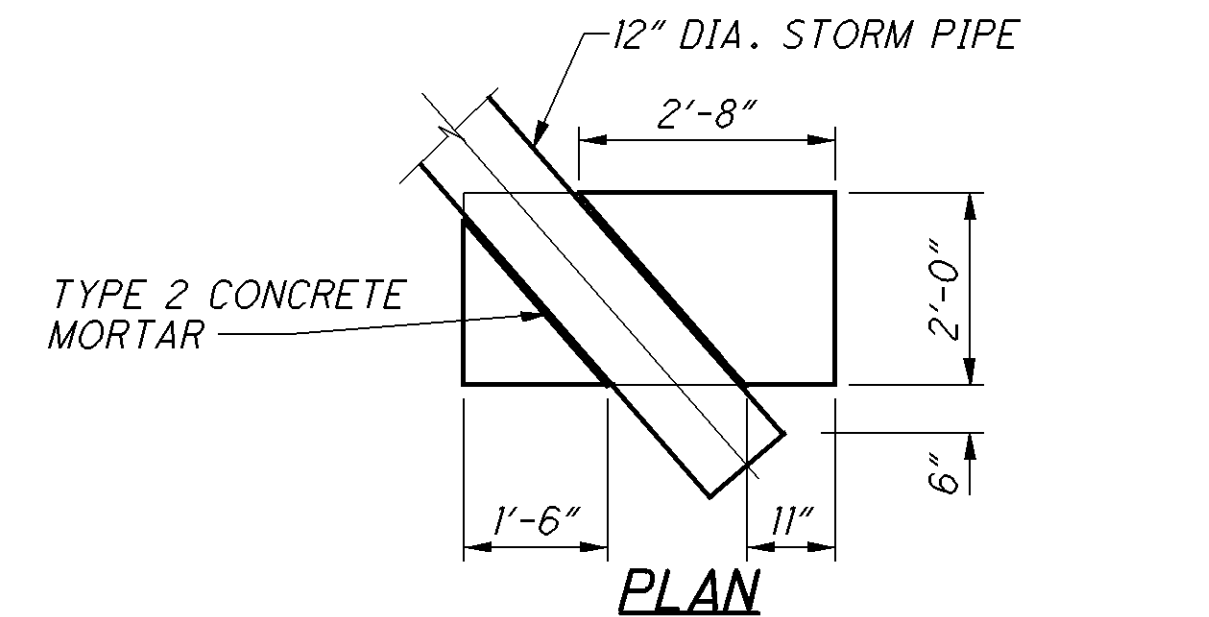
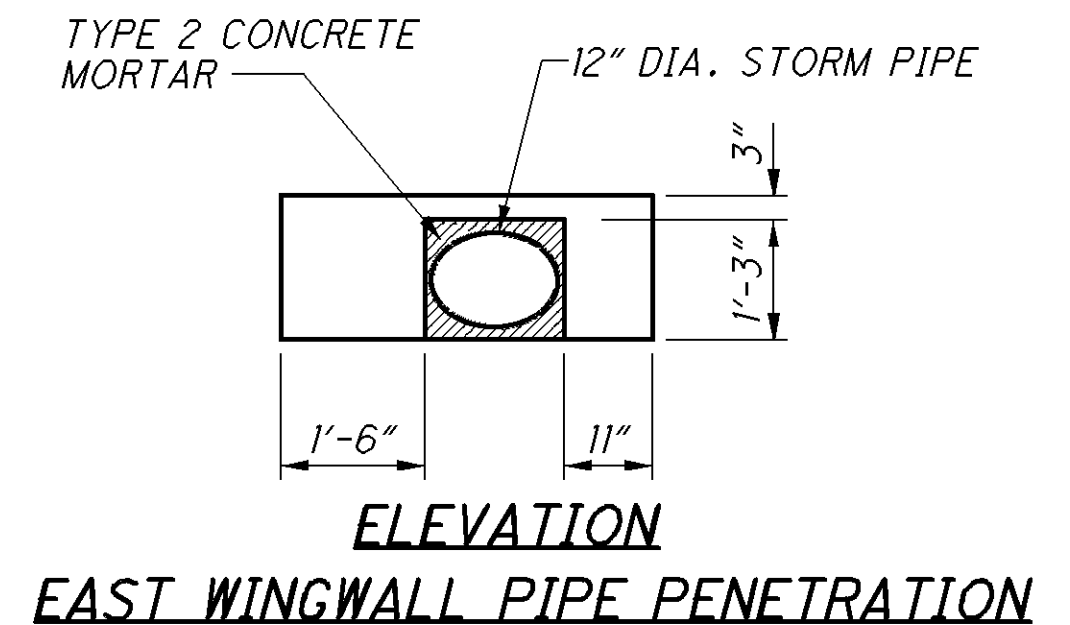
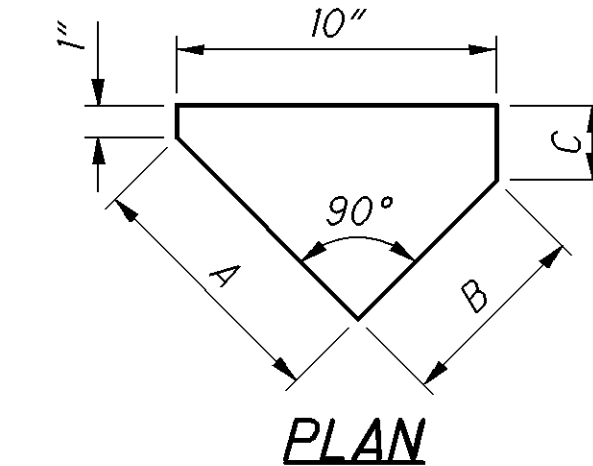
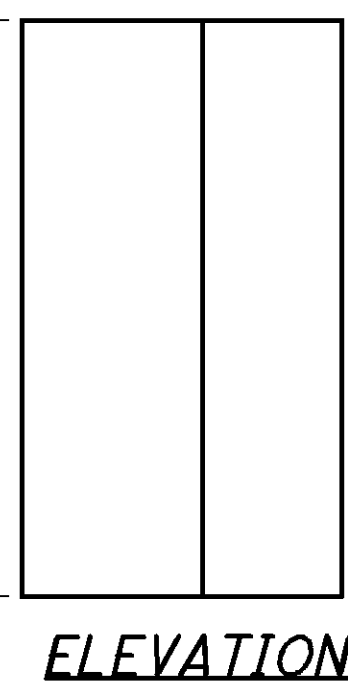
- ① BB60 - 60" BOTTOM BLOCK
- ② HMB41 - 41" HALF MIDDLE BLOCK
- ③ MB41 - 41" MIDDLE BLOCK
- ④ HTCB - HALF TOP CORNER BLOCK
- ⑤ TCB - TOP CORNER BLOCK
- ⑥ HTB28 - 28" HALF TOP BLOCK
- ⑦ TB28 - 28" TOP BLOCK

NOTES

1. PLACE WEDGE TYPE 1 BETWEEN CULVERT AND BLOCK.
2. PLACE WEDGE TYPE 2 BETWEEN BLOCK AND FORESLOPE WALL.
3. PLACE WEDGE TYPE 3 BETWEEN BLOCK AND FORESLOPE WALL.
4. PLACE WEDGE TYPE 4 BETWEEN BLOCK AND FORESLOPE WALL.



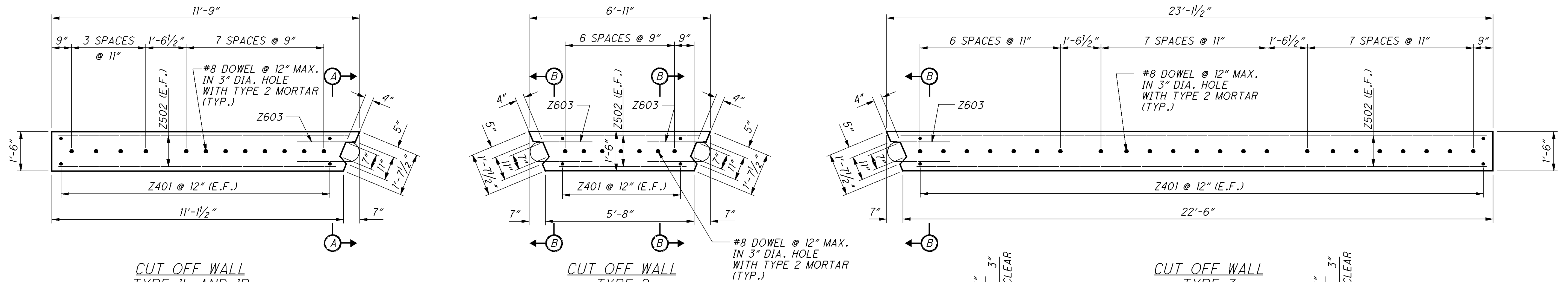
VIEW E-E
WEST WINGWALL ELEVATION



WEDGE TYPE	ROW	A	B	C
1	1	1'-0 7/8"	1 1/4"	9 1/4"
1	2	1'-0 7/8"	1 1/4"	9 1/4"
1	3	1'-0 7/8"	1 1/4"	9 1/4"
2	4	11 1/4"	2 3/4"	7"
3	5	9 5/8"	4 1/4"	4 3/4"
4	6	8"	5 3/4"	2 1/2"

WEDGE DETAIL

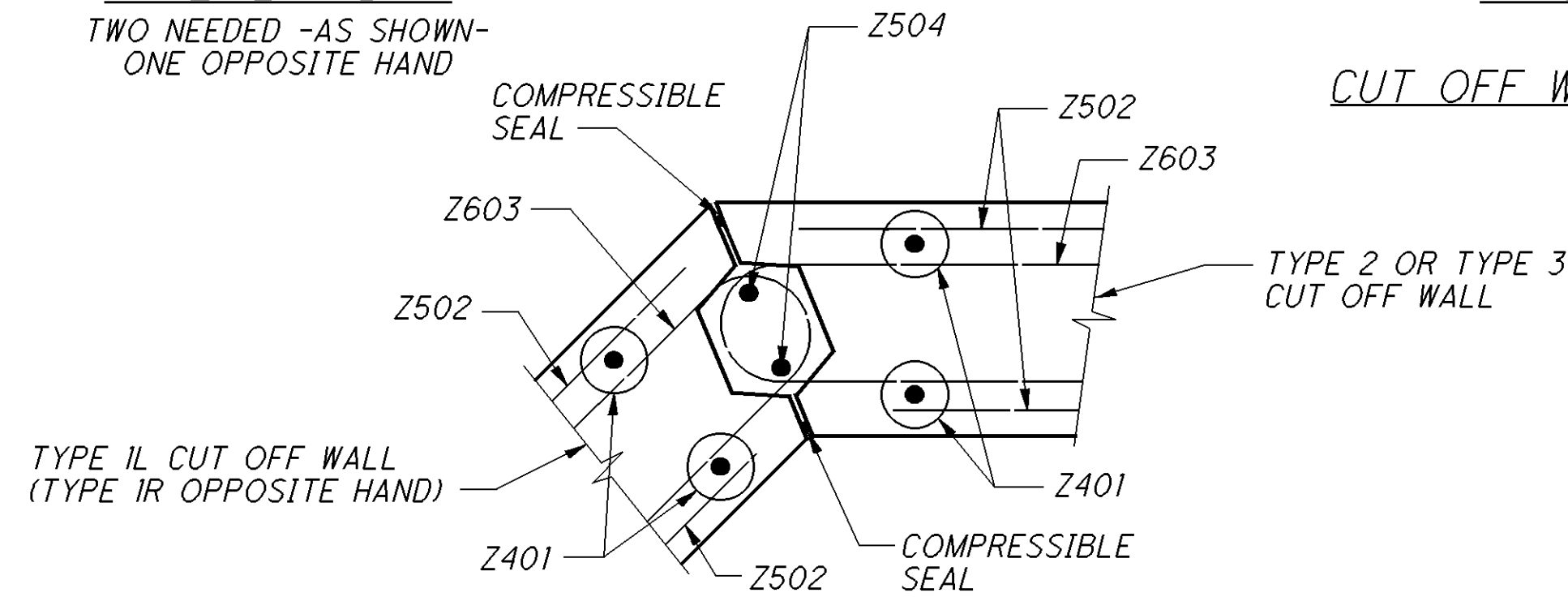
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CUT OFF WALL
TYPE 1L AND 1R
TWO NEEDED -AS SHOWN-
ONE OPPOSITE HAND

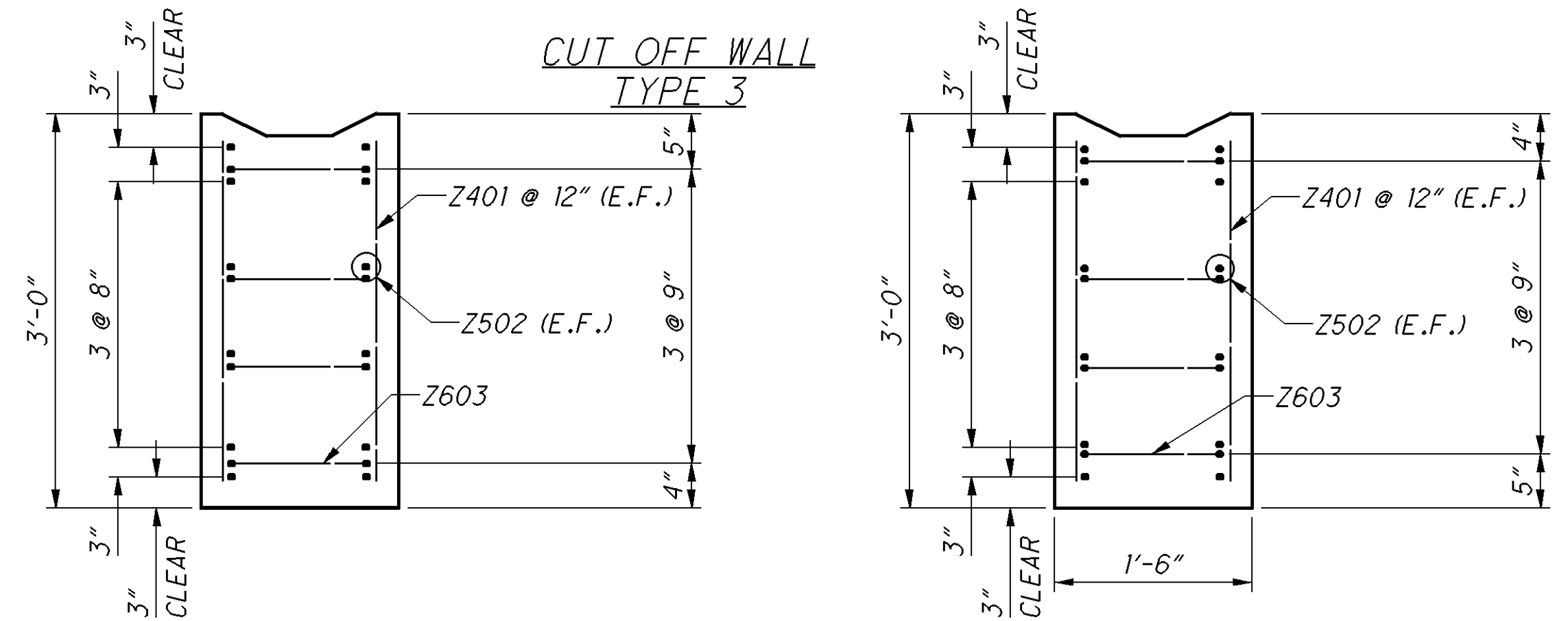
CUT OFF WALL
TYPE 2

CUT OFF WALL
TYPE 3



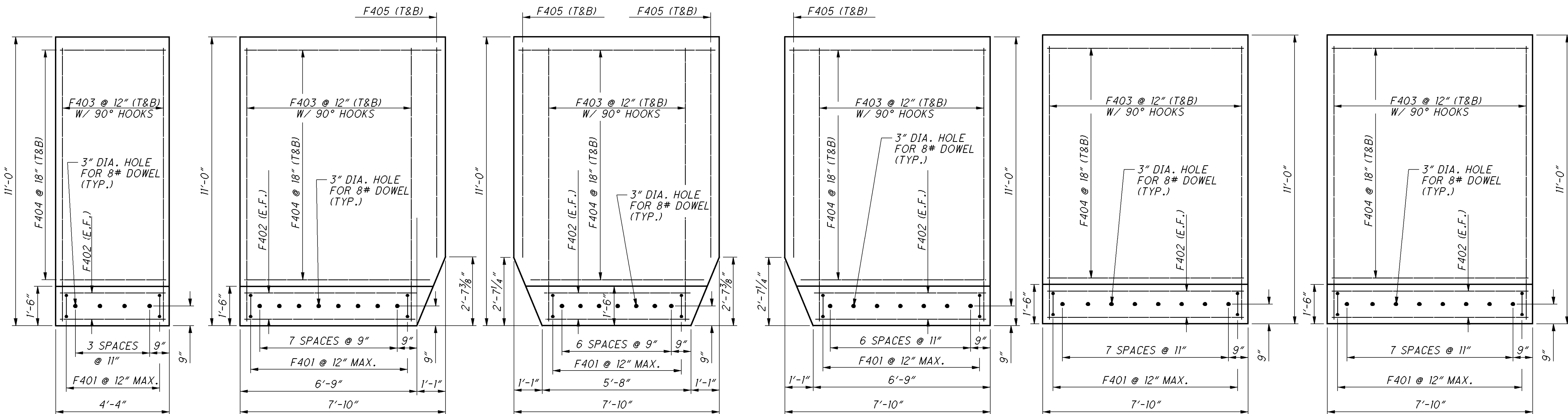
CUT OFF WALL CONNECTION DETAIL

CUT OFF WALL PLAN



SECTION A-A

SECTION B-B



TYPE A

TYPE B

TYPE C

TYPE D

TYPE E

TYPE F

TYPE AL SHOWN - TWO NEEDED
TYPE AR OPPOSITE HAND - ONE NEEDED

TYPE BL SHOWN - TWO NEEDED
TYPE BR OPPOSITE HAND - ONE NEEDED

FOOTING SLAB PLAN

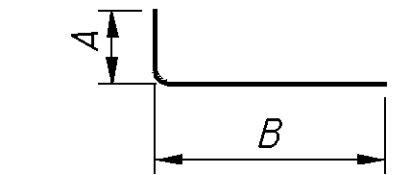
NOTES

1. CUT OFF WALL TYPE LOCATIONS SHOWN ON SHEETS 278 AND 378.
2. FOOTING SLAB TYPE LOCATIONS SHOWN ON SHEETS 278 AND 378.
3. FOR REINFORCING, SEE SHEET 678.

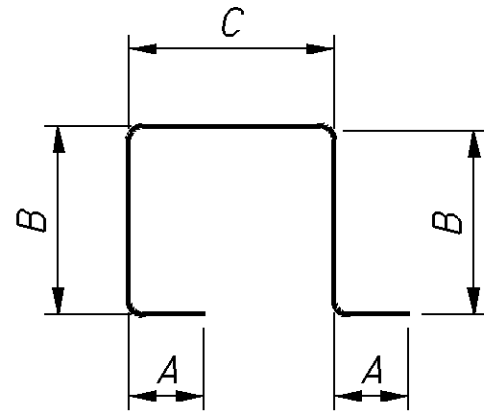
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EAST HEADWALL REINFORCING SCHEDULE								
BAR MARK	NUMBER	LENGTH	WEIGHT (LBS.)	WALL TYPE	BAR TYPE DIMENSIONS			INC.
					A	B	C	
CUTOFF WALL TYPE 1 LEFT								
D801	10	2'- 10"	76	STR.				
Z401	26	2'- 7"	45	STR.				
Z502	12	11'- 5"	143	STR.				
Z603	4	5'- 5"	33	S11	2'- 0"	0'- 11 "		
CUTOFF WALL TYPE 2								
D801	7	2'- 10"	53	STR.				
Z401	16	2'- 7"	28	STR.				
Z502	12	6'- 7"	83	STR.				
Z603	8	5'- 5"	66	S11	2'- 0"	0'- 11 "		
Z504	4	2'- 7"	11	STR.				
CUTOFF WALL TYPE 1 RIGHT								
D801	10	2'- 10"	76	STR.				
Z401	26	2'- 7"	45	STR.				
Z502	12	11'- 5"	143	STR.				
Z603	4	5'- 5"	33	S11	2'- 0"	0'- 11 "		
FOOTING SLAB A LEFT								
F401	5	4'- 7"	16	8	0'- 7"	1'- 2"	1'- 1"	
F402	2	10'- 9"	15	STR.				
F403	10	11'- 2"	75	1	0'- 8"	10'- 6"		
F404	16	3'- 11"	42	STR.				
FOOTING SLAB B LEFT								
F401	9	4'- 7"	28	8	0'- 7"	1'- 2"	1'- 1"	
F402	2	7'- 4"	10	STR.				
F403	16	11'- 2"	120	1	0'- 8"	10'- 6"		
F404	16	7'- 5"	80	STR.				
F405	2	7'- 10"	11	STR.				
FOOTING SLAB C								
F401	8	4'- 7"	25	8	0'- 7"	1'- 2"	1'- 1"	
F402	2	6'- 10"	10	STR.				
F403	12	11'- 2"	90	1	0'- 8"	10'- 6"		
F404	16	7'- 5"	80	STR.				
F405	4	7'- 10"	21	STR.				
FOOTING SLAB B RIGHT								
F401	9	4'- 7"	28	8	0'- 7"	1'- 2"	1'- 1"	
F402	2	7'- 4"	10	STR.				
F403	16	11'- 2"	120	1	0'- 8"	10'- 6"		
F404	16	7'- 5"	80	STR.				
F405	2	7'- 10"	11	STR.				
FOOTING SLAB A RIGHT								
F401	5	4'- 7"	16	8	0'- 7"	1'- 2"	1'- 1"	
F402	2	10'- 9"	15	STR.				
F403	10	11'- 2"	75	1	0'- 8"	10'- 6"		
F404	16	3'- 11"	42	STR.				
FORESLOPE WALL								
FS401	6	3'- 10"	16	STR.				
FS402	4	6'- 9"	19	STR.				
FS403	5	6'- 9"	23	STR.				
FS404	8	4'- 5"	24	1	3'- 10"	0'- 7"		
FS405	8	3'- 2"	17	19	1'- 0"	1'- 2"	1'- 0"	
FS406	8	3'- 3"	18	1	2'- 9"	0'- 6"		
FS407	5	6'- 9"	23	STR.				
FS408	8	4'- 0"	22	STR.				
		TOTAL	2,017					

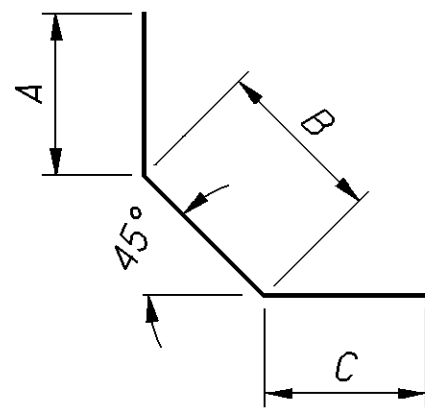
WEST HEADWALL REINFORCING SCHEDULE								
BAR MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	BAR TYPE DIMENSIONS			INC.
					A	B	C	
CUTOFF WALL TYPE 1 LEFT								
D801	10	2'- 10"	76	STR.				
Z401	26	2'- 7"	45	STR.				
Z502	12	11'- 5"	143	STR.				
Z603	4	5'- 5"	33	S11	2'- 0"	0'- 11 "		
CUTOFF WALL TYPE 3								
D801	20	2'- 10"	152	STR.				
Z401	50	2'- 7"	87	STR.				
Z502	12	23'- 2"	290	STR.				
Z603	4	5'- 5"	33	S11	2'- 0"	0'- 11 "		
Z504	2	2'- 7"	6	STR.				
FOOTING SLAB A LEFT								
F401	5	4'- 7"	16	8	0'- 7"	1'- 2"	1'- 1"	
F402	2	10'- 9"	15	STR.				
F403	10	11'- 2"	75	1	0'- 8"	10'- 6"		
F404	16	3'- 11"	42	STR.				
FOOTING SLAB B LEFT								
F401	9	4'- 7"	28	8	0'- 7"	1'- 2"	1'- 1"	
F402	2	7'- 4"	10	STR.				
F403	16	11'- 2"	120	1	0'- 8"	10'- 6"		
F404	16	7'- 5"	80	STR.				
F405	2	7'- 10"	11	STR.				
FOOTING SLAB D								
F401	9	4'- 7"	28	8	0'- 7"	1'- 2"	1'- 1"	
F402	2	7'- 6"	11	STR.				
F403	16	11'- 2"	120	1	0'- 8"	10'- 6"		
F404	16	7'- 5"	80	STR.				
F405	2	7'- 10"	11	STR.				
FOOTING SLAB E								
F401	9	4'- 7"	28	8	0'- 7"	1'- 2"	1'- 1"	
F402	2	7'- 5"	10	STR.				
F403	18	11'- 2"	135	1	0'- 8"	10'- 6"		
F404	16	7'- 5"	80	STR.				
FOOTING SLAB F								
F401	9	4'- 7"	28	8	0'- 7"	1'- 2"	1'- 1"	
F402	2	7'- 5"	10	STR.				
F403	18	11'- 2"	135	1	0'- 8"	10'- 6"		
F404	16	7'- 5"	80	STR.				
FORESLOPE WALL								
FS401	6	3'- 10"	16	STR.				
FS402	4	6'- 9"	19	STR.				
FS403	5	6'- 9"	23	STR.				
FS404	8	4'- 5"	24	1	3'- 10"	0'- 7"		
FS405	8	3'- 2"	17	19	1'- 0"	1'- 2"	1'- 0"	
FS406	8	3'- 3"	18	1	2'- 9"	0'- 6"		
FS407	5	6'- 9"	23	STR.				
FS408	8	4'- 0"	22	STR.				
		TOTAL	2,180					



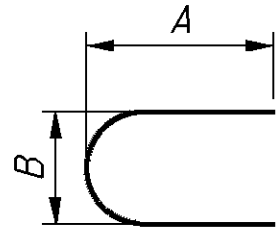
TYPE-1



TYPE-8



TYPE-19

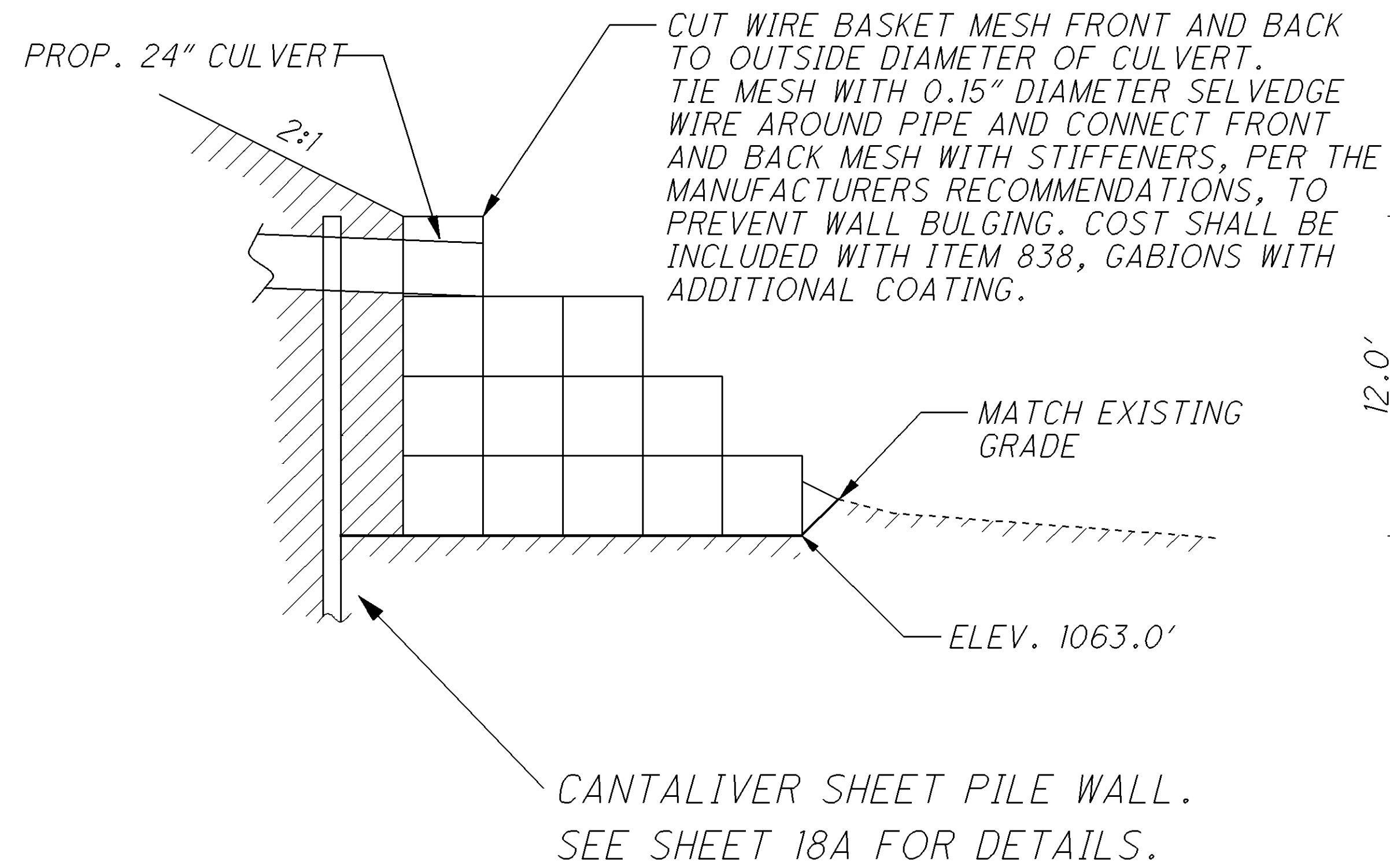
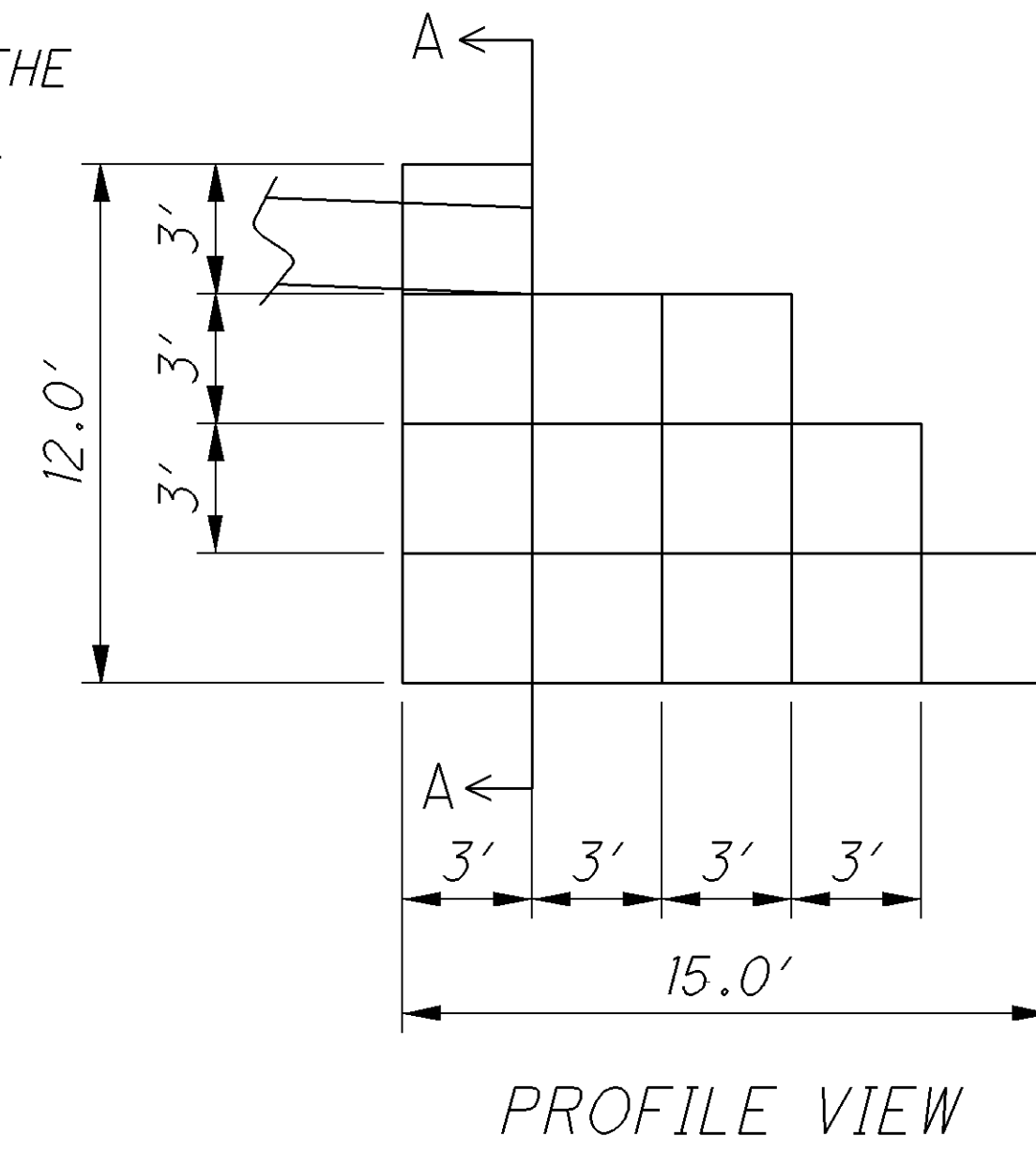
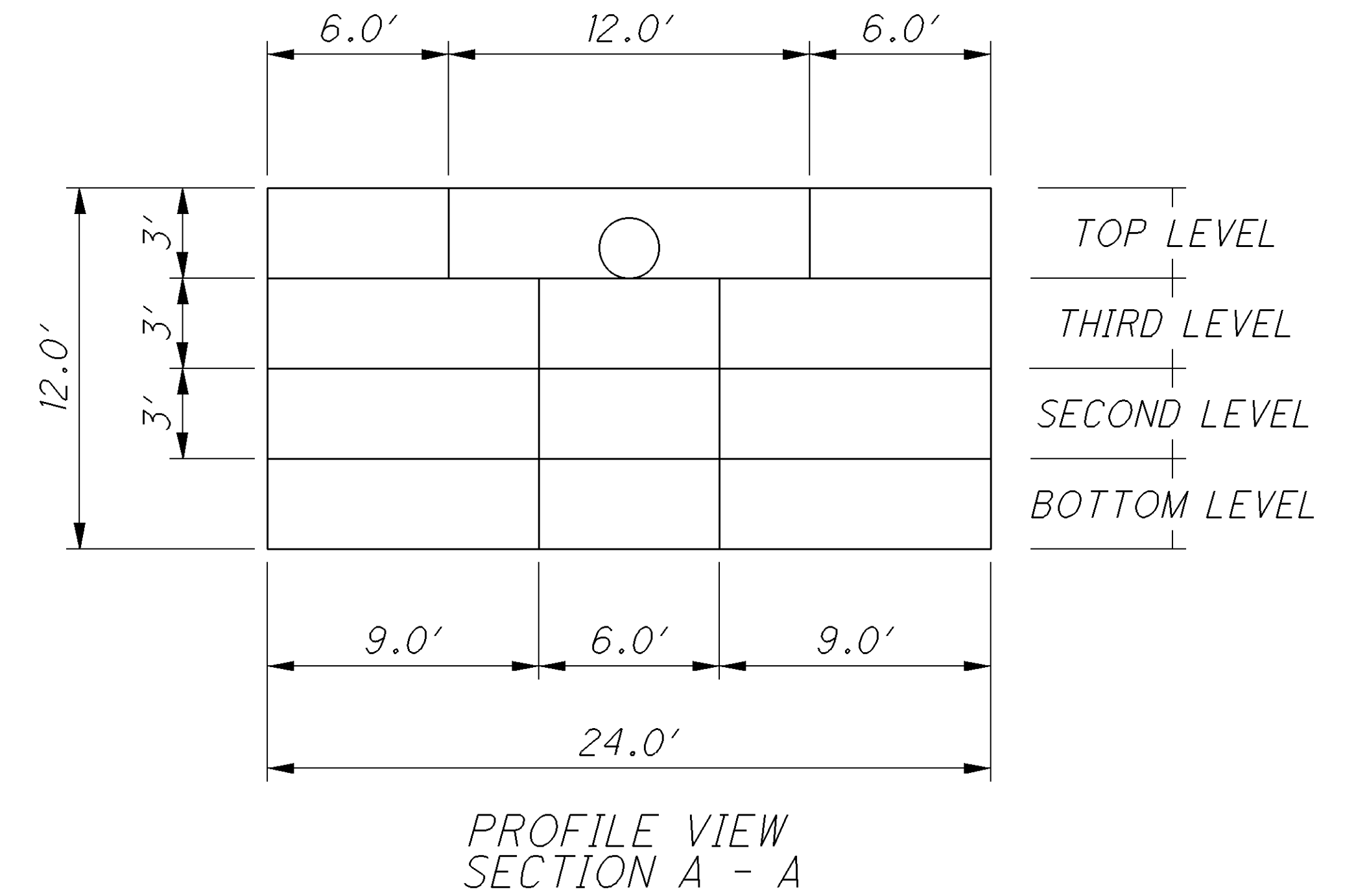
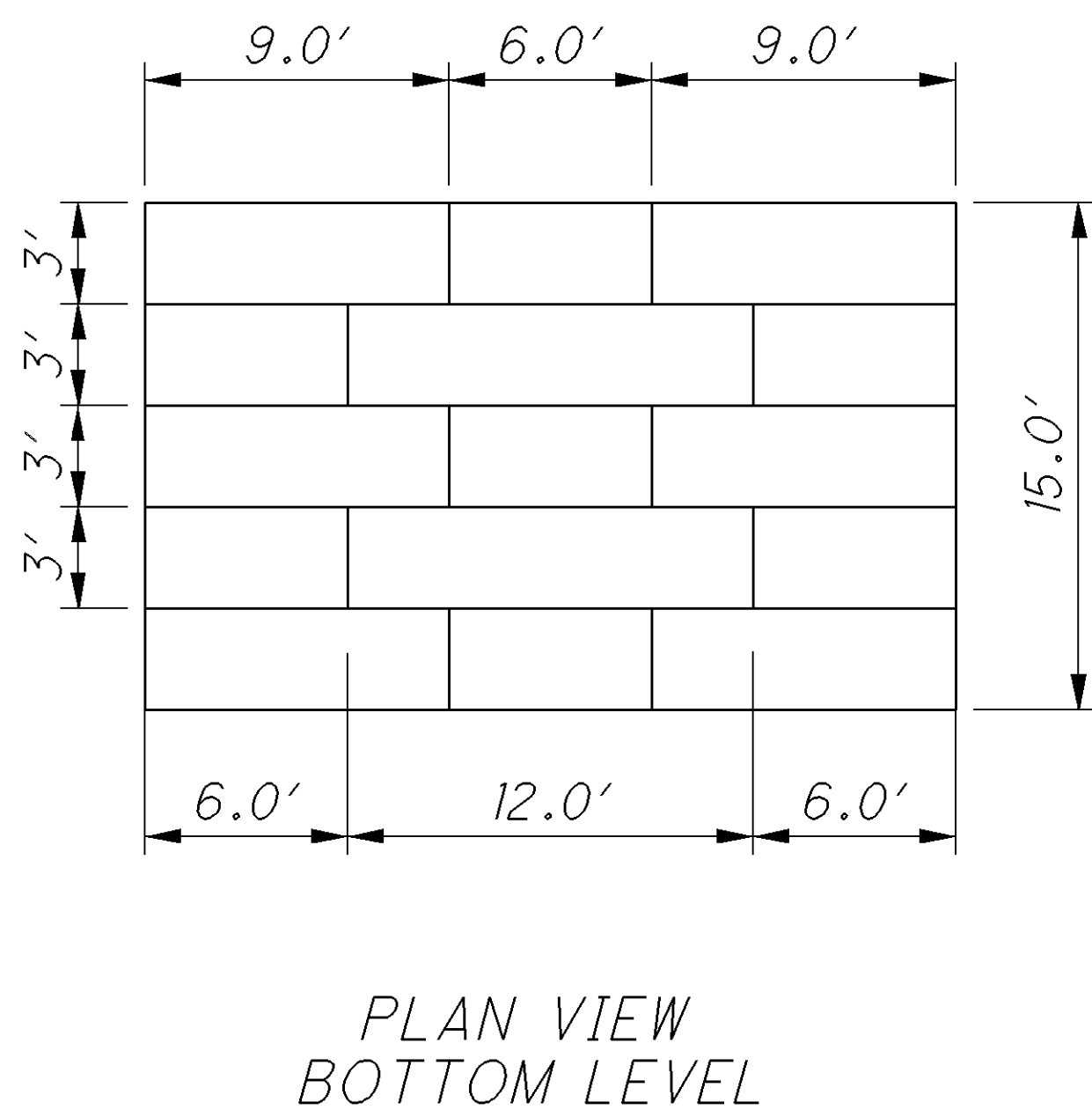
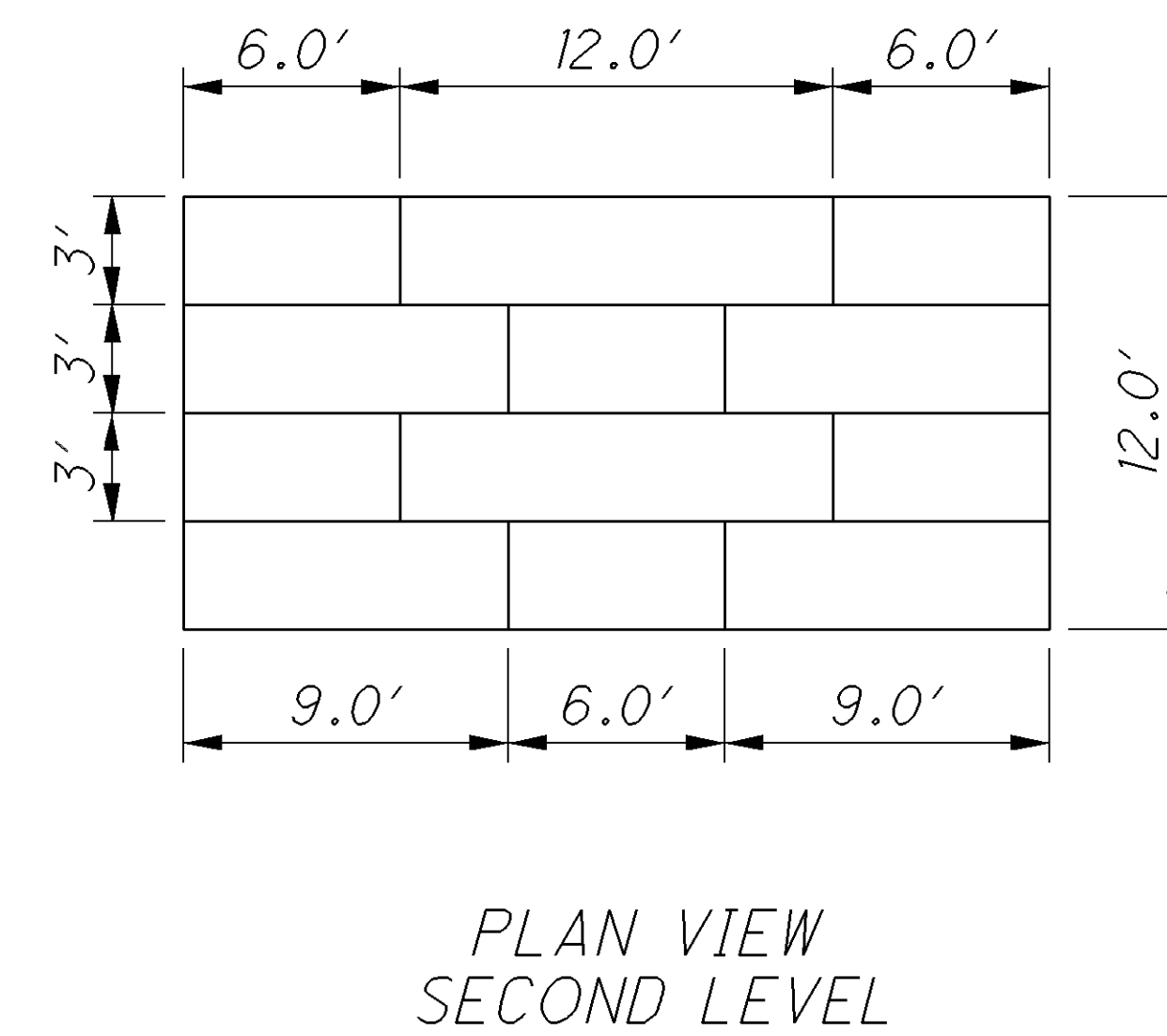
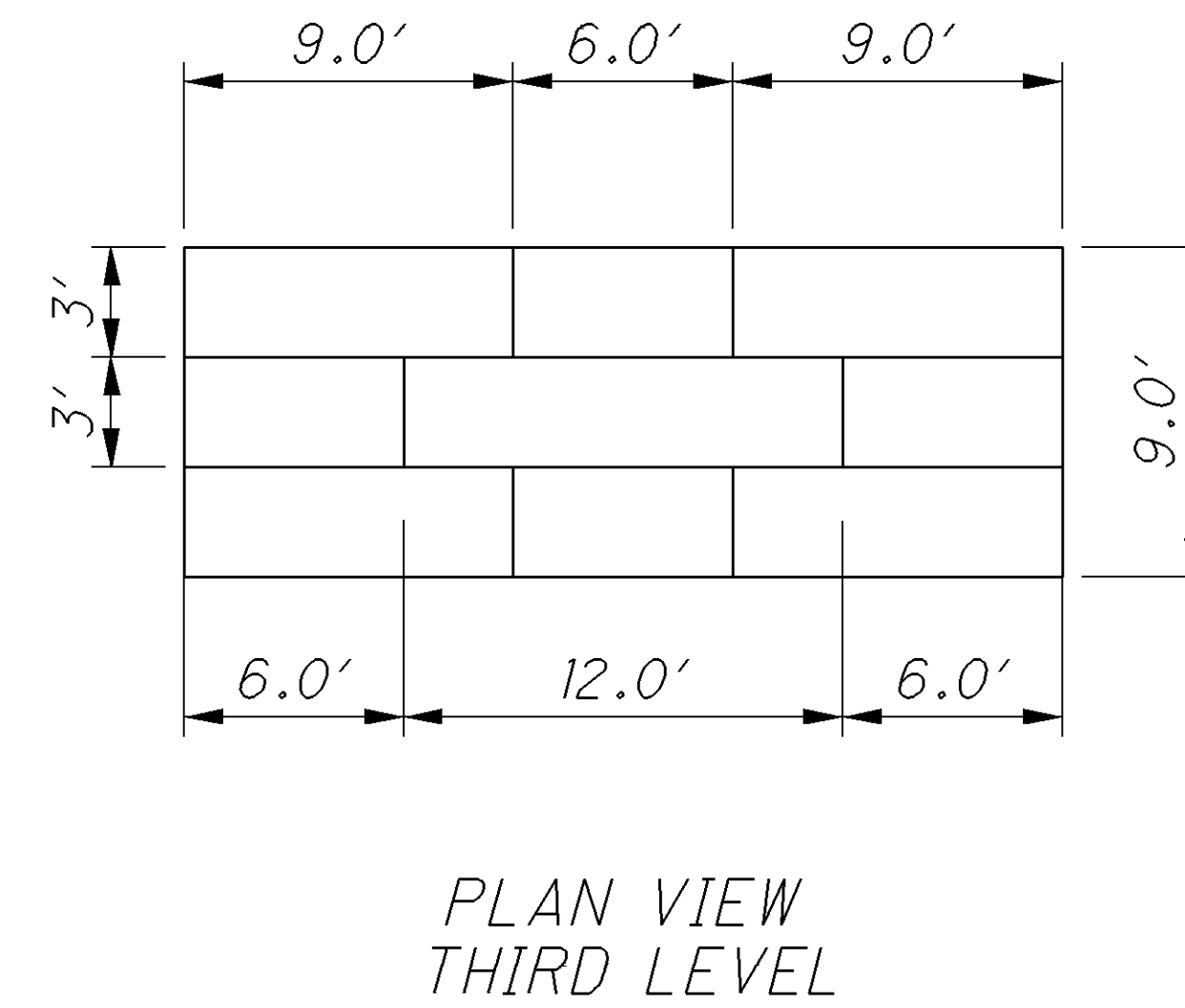
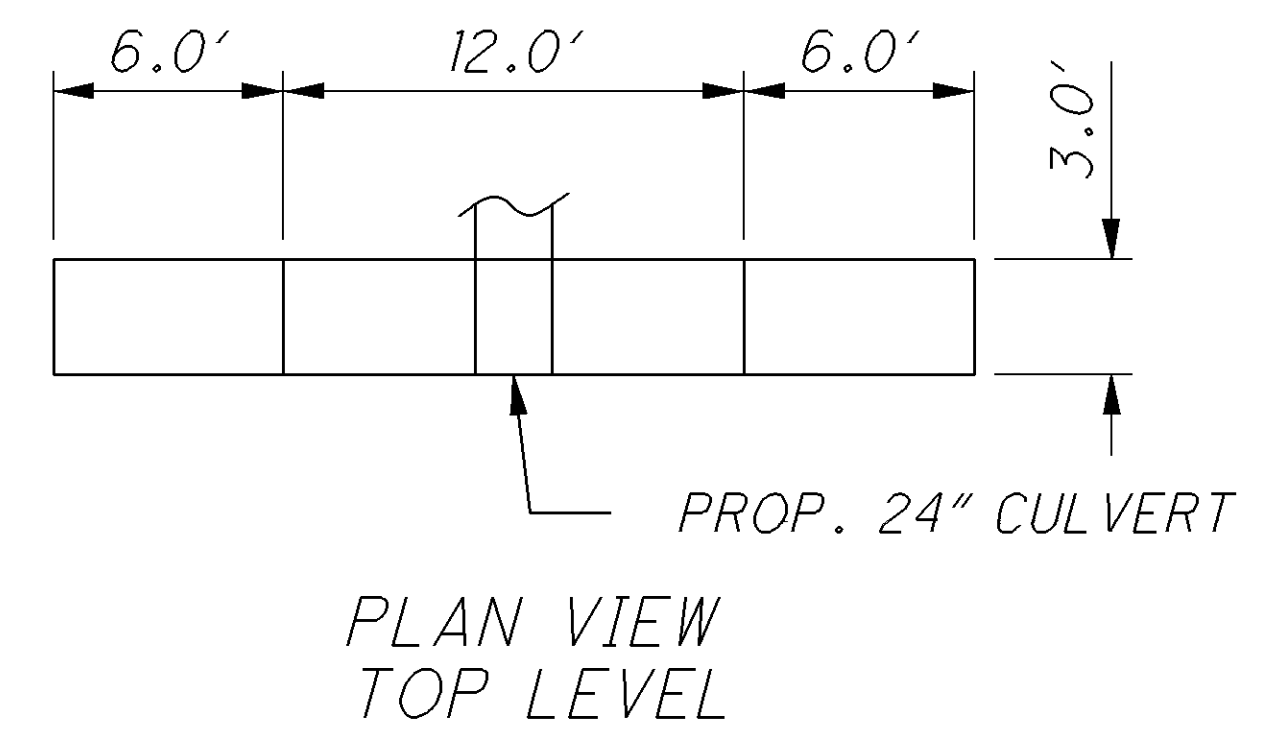


TYPE-SII

SHEET TOTAL FOR ITEM 509 - EPOXY COATED REINFORCING STEEL 4197 POUNDS

QUANTITY CARRIED TO SHEET 16/35

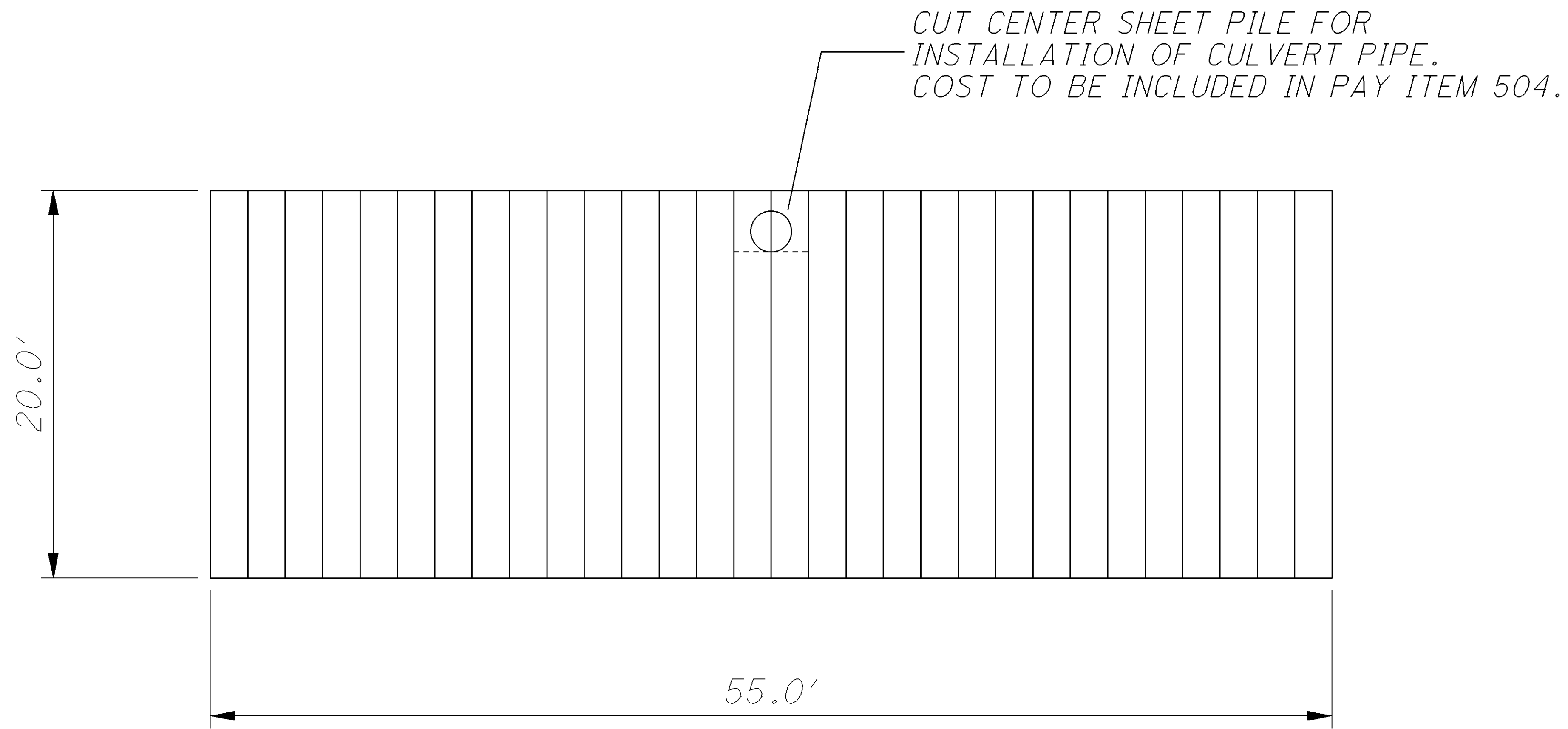
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DETAILS NTS

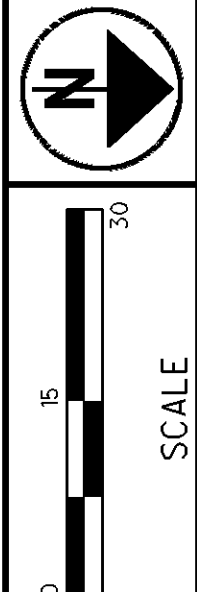
GABION WALL DETAIL (SR 87-1.34)

CUY-252-3.10/ VAR



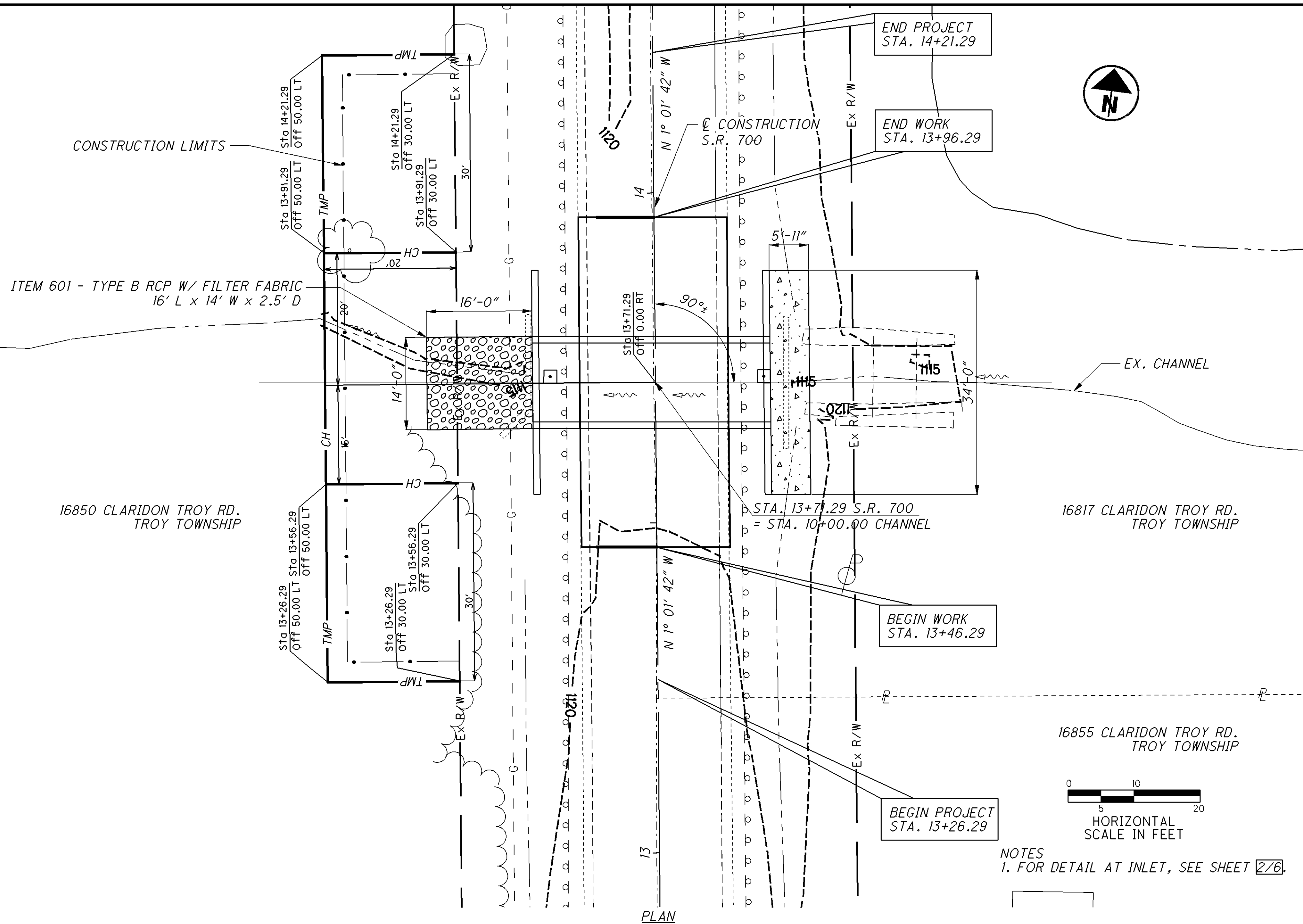
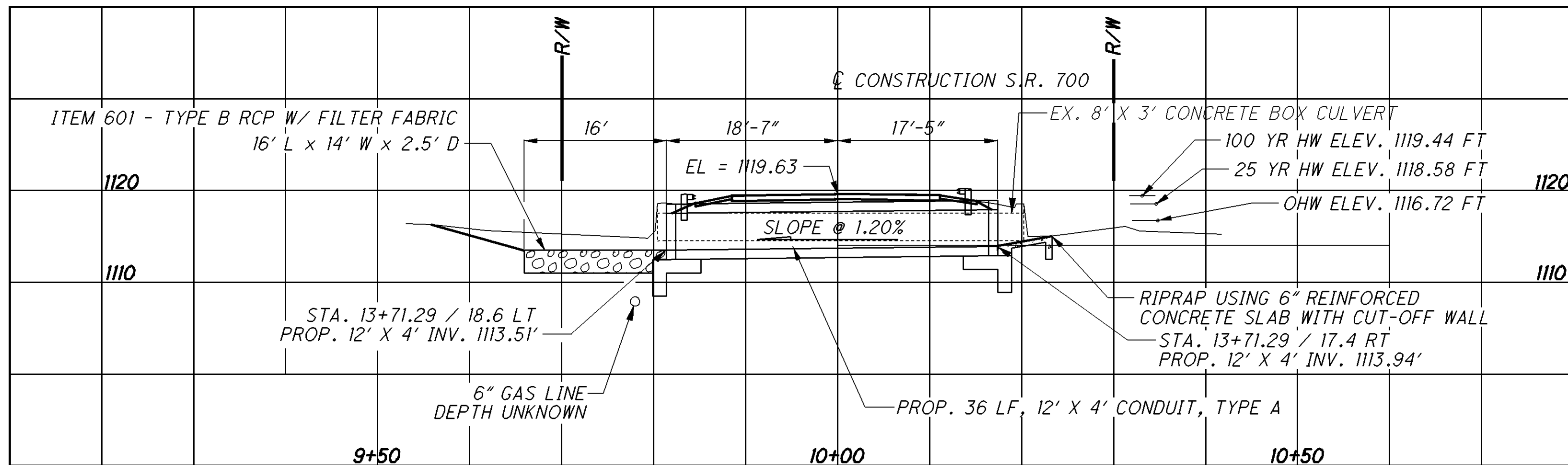
CANTALIVER SHEET PILE OF US STEEL PZ22
OR EQUIVALENT OR HEAVIER SECTION.
MINIMUM SECTION MODULUS 9.0 IN ³ PER
FOOT OF WALL. DRIVE TO REFUSAL ON
SHALE BEDROCK, APPROXIMATE TIP ELEVATION
1055 FEET.

DETAIL NTS



CALCULATED	CHECKED
JAG	MKM

CUY-252-3.10/ VAR



BENCHMARK DATA

FOR BENCHMARK INFORMATION, SEE ROADWAY PLAN SHEET

9
35

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE.

FOR TRAFFIC INFORMATION, SEE ROADWAY PLAN SHEET

11A
35

LEGEND

- BORING LOCATION
- CHANNEL EXCAVATION
- ROCK CHANNEL PROTECTION, TYPE B
30" THICK WITH FILTER FABRIC
- RIPRAP USING 6" REINFORCED CONCRETE SLAB

HYDRAULIC DATA

DRAINAGE AREA = 390 ACRES
Q (25) = 228 CFS V (25) = 14.11 FT/S
Q (100) = 311 CFS V (100) = 15.71 FT/S
STRUCTURE CLEARS THE 25 YEAR
DESIGN HW BY 0.86 FEET.

EXISTING STRUCTURE

TYPE: 8' X 3' CONCRETE BOX CULVERT

SPAN: 8'
ROADWAY: 26.5' F/F GUARDRAIL
LOADING: UNKNOWN
SKEW: NONE
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
CROWN: NORMAL
STRUCTURAL FILE NUMBER: NONE
DATE BUILT: UNKNOWN
DISPOSITION: TO BE REPLACED

PROPOSED STRUCTURE

TYPE: 12' X 4' REINFORCED CONCRETE BOX

SPAN: 12'
ROADWAY: 26.5' F/F GUARDRAIL
LOADING: PER CMS 706.05 AND ASTM C1433
SKEW: NONE
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
CROWN: 0.0156 FT/FT
COORDINATES: LATITUDE N 41° 24' 48"
LONGITUDE W 81° 24' 03"

REVISED 3/28/12 DESC. PROJECT DESIGNATION BLOCK

DESIGNED	DRAWN	REVIEWED	DATE
RMS	RMS	CWF	2/27/12
CHECKED	REVISED	STRUCTURE FILE NUMBER	2802414
CWP			

GEAUGA COUNTY
STA. 13+65.29
STA. 13+77.29

SITE PLAN
GEA-700-0446
S.R. 700 OVER UNNAMED CREEK

CUY-252-3.10/ VAR

1 / 6

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GENERAL NOTES

DESIGN SPECIFICATIONS: THIS STANDARD DRAWING CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA: THE FOLLOWING DESIGN DATA IS ASSUMED:

INTERNAL ANGLE OF FRICTION = 30 DEGREES
COEFFICIENT OF FRICTION = 0.30
UNIT WEIGHT OF SOIL = 120 PCF
UNIT WEIGHT OF CONCRETE = 150 PCF
HEIGHT OF LIVE LOAD SURCHARGE = 2 FT.
MAXIMUM FOUNDATION BEARING PRESSURE = 2000 P.S.F.

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI
(FOOTING, WINGWALL AND FORESLOPE WALL)

REINFORCING STEEL - ASTM A615, A616, OR A617
GRADE 60 MINIMUM YIELD STRENGTH
60,000 PSI (ALL REINFORCING SHALL BE
EPOXY COATED)

PRECAST CONCRETE: AT THE OPTION OF THE CONTRACTOR, PRECAST FOOTINGS AND WINGWALLS MAY BE USED PROVIDED THEY ARE SIZED TO MEET THE SOIL LOADING AND MEET OR EXCEED THE MATERIAL STRENGTHS SPECIFIED HEREIN. THE CONTRACTOR SHALL SUBMIT DESIGNS AND SHOP DRAWINGS TO THE OFFICE OF STRUCTURAL ENGINEERING FOR APPROVAL.

FORESLOPE WALL ANCHOR DOWELS: ANCHOR PER CMS 510 WITH NONSHRINK, NONMETALLIC GROUT CONFORMING TO CMS 705.20 AND TO A DEPTH SPECIFIED ON SHEET 4/6. PAYMENT FOR DOWEL HOLES, GROUT AND INSTALLATION SHALL BE INCLUDED WITH ITEM 898.

AS AN ALTERNATIVE TO RESIN BONDING, THREADED INSERTS OR NONPROTRUDING MECHANICAL CONNECTORS CAST INTO THE CULVERT BY THE MANUFACTURER MAY BE USED PROVIDED THEY CAN RESIST AN ULTIMATE PULL-OUT STRENGTH OF 12 KIPS AND MAINTAIN A MINIMUM COVER OF 3 INCHES AT THE BOTTOM OF THE CULVERT SLAB. MECHANICAL CONNECTORS MUST PROVIDE AN "L-SHAPED" BAR INSIDE THE CULVERT WITH A MINIMUM HORIZONTAL LENGTH OF 12 INCHES. PAYMENT FOR INSERTS OR MECHANICAL CONNECTORS SHALL BE INCLUDED WITH ITEM 603.

BACKFILL LIMITATION: WHEN THE DESIGN HEIGHT IS GREATER THAN 10 FT., THE BACKFILL BEHIND THE WINGWALLS SHALL NOT BE PLACED HIGHER THAN THE ELEVATION OF THE SOIL ABOVE THE TOE. WHEN THE SOIL ABOVE THE TOE IS AT ITS FINISHED ELEVATION, THE REMAINDER OF THE BACKFILL MAY BE PLACED.

POROUS BACKFILL WITH FILTER FABRIC 1'-6" THICK SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND TO 12" BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6" ABOVE THE TOP ELEVATION OF THE WEEPHOLE.

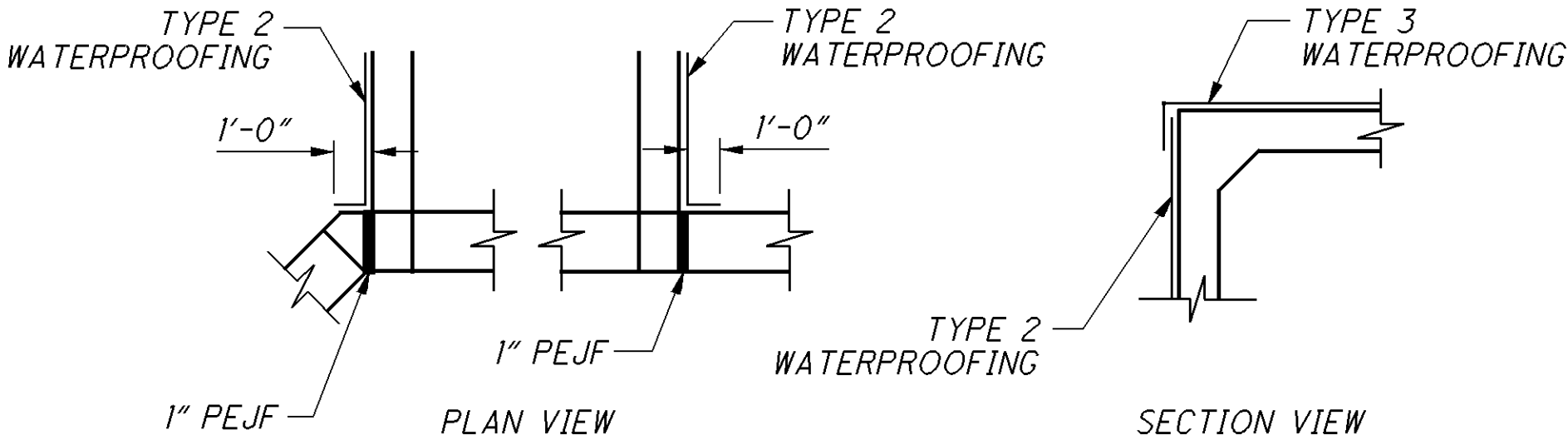
WEEPHOLES SHALL BE PLACED 6" TO 12" ABOVE THE NORMAL WATER ELEVATION OR GROUND LINE AND SHALL HAVE A MAXIMUM SPACING OF 10'-0". A MINIMUM OF ONE WEEPHOLE SHALL BE PROVIDED PER WINGWALL.

PREFORMED EXPANSION JOINT FILLER: PREFORMED EXPANSION JOINT FILLER (PEJF) CONFORMING TO CMS 705.03, 1 INCH THICK, SHALL BE PLACED ABOVE THE FOOTING BETWEEN THE SIDES OF THE BOX CULVERT AND THE ENDS OF THE WINGWALLS. PAYMENT FOR MATERIALS AND INSTALLATION SHALL BE INCLUDED WITH ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER.

SEALING OF FORESLOPE WALL AND WINGWALLS: ALL EXPOSED FORESLOPE WALL AND WINGWALL CONCRETE SHALL BE SEALED WITH EPOXY-URETHANE SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DIAGRAMS BELOW. PAYMENT FOR THE EPOXY-URETHANE SEALER SHALL BE PER ITEM 512 - SEALING OF CONCRETE SURFACES.

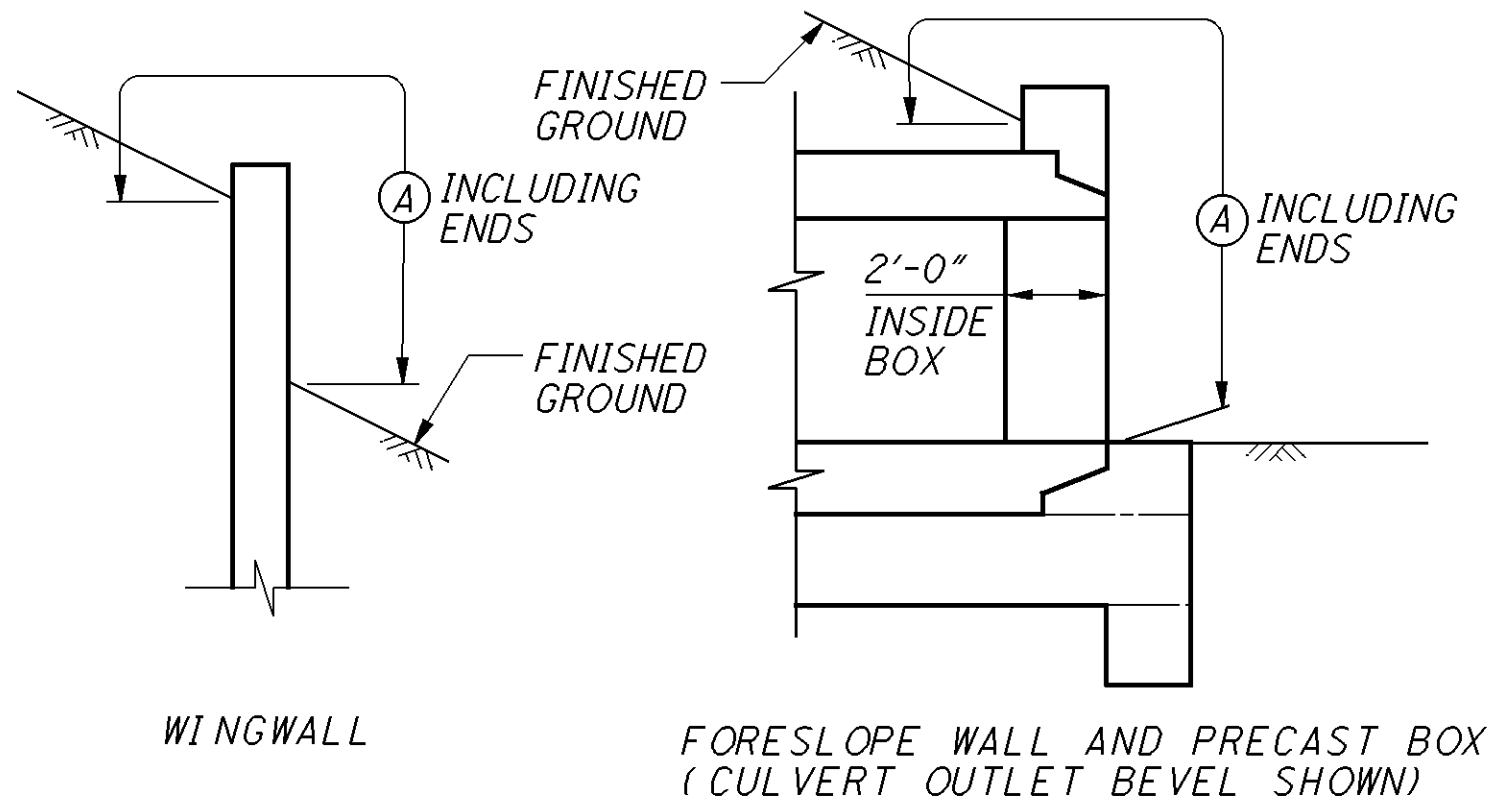
WATERPROOFING: TYPE 2 WATERPROOFING, PER CMS 512.09 AND 711.25, SHALL EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 2 WATERPROOFING.

TYPE 3 WATERPROOFING, PER CMS 512.09, 705.04 AND 711.29 SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 3 WATERPROOFING.



WATERPROOFING DETAILS

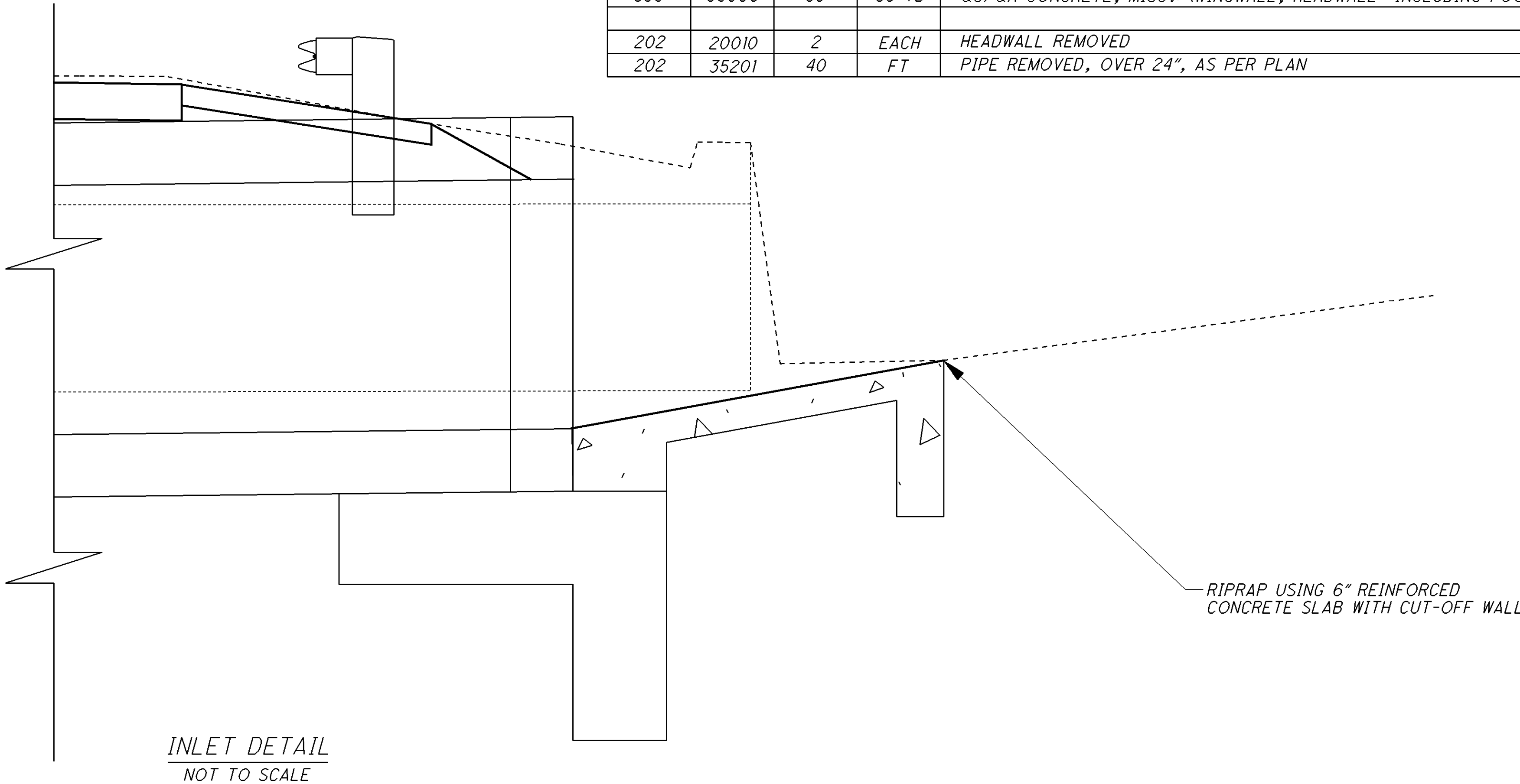
BASIS OF PAYMENT: ALL LABOR, EQUIPMENT AND INCIDENTALS REQUIRED TO CONSTRUCT THE FOOTING, CUTOFF WALL, WINGWALLS AND FORESLOPE WALL SHALL BE INCLUDED WITH ITEM 898 - QC/QA CONCRETE, MISC.: (WINGWALL, HEADWALL - INCLUDING FOOTING). PAYMENT FOR REINFORCING STEEL SHALL BE INCLUDED WITH ITEM 509 - EPOXY COATED REINFORCING STEEL.



LIMITS OF ITEM 512-SEALING CONCRETE SURFACES

Ⓐ - SEAL ENTIRE CONCRETE SURFACE AREA

ESTIMATED QUANTITIES				
ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION
503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING
503	21300	LUMP		UNCLASSIFIED EXCAVATION
509	10000	3192	POUND	EPOXY COATED REINFORCING STEEL
512	10000	65	SQ YD	SEALING OF CONCRETE SURFACES
512	33000	48	SQ YD	TYPE 2 WATERPROOFING
512	33010	64	SQ YD	TYPE 3 WATERPROOFING
516	13600	26	SQ FT	1" PREFORMED EXPANSION JOINT FILLER
518	21230	LUMP		POROUS BACKFILL WITH FILTER FABRIC
601	11000	23	SQ YD	RIPRAP USING 6" REINFORCED CONCRETE SLAB
601	32104	21	CU YD	ROCK CHANNEL PROTECTION, TYPE B WITH FABRIC FILTER
603	95601	36	FT	12' x 4' CONDUIT TYPE A, 706.05, AS PER PLAN
613	41200	22	CU YD	LOW STRENGTH BACKFILL
898	98000	68	CU YD	QC/QA CONCRETE, MISC.: (WINGWALL, HEADWALL -INCLUDING FOOTING)
202	20010	2	EACH	HEADWALL REMOVED
202	35201	40	FT	PIPE REMOVED, OVER 24", AS PER PLAN



REVISED 3/28/12 DESC. PROJECT DESIGNATION BLOCK

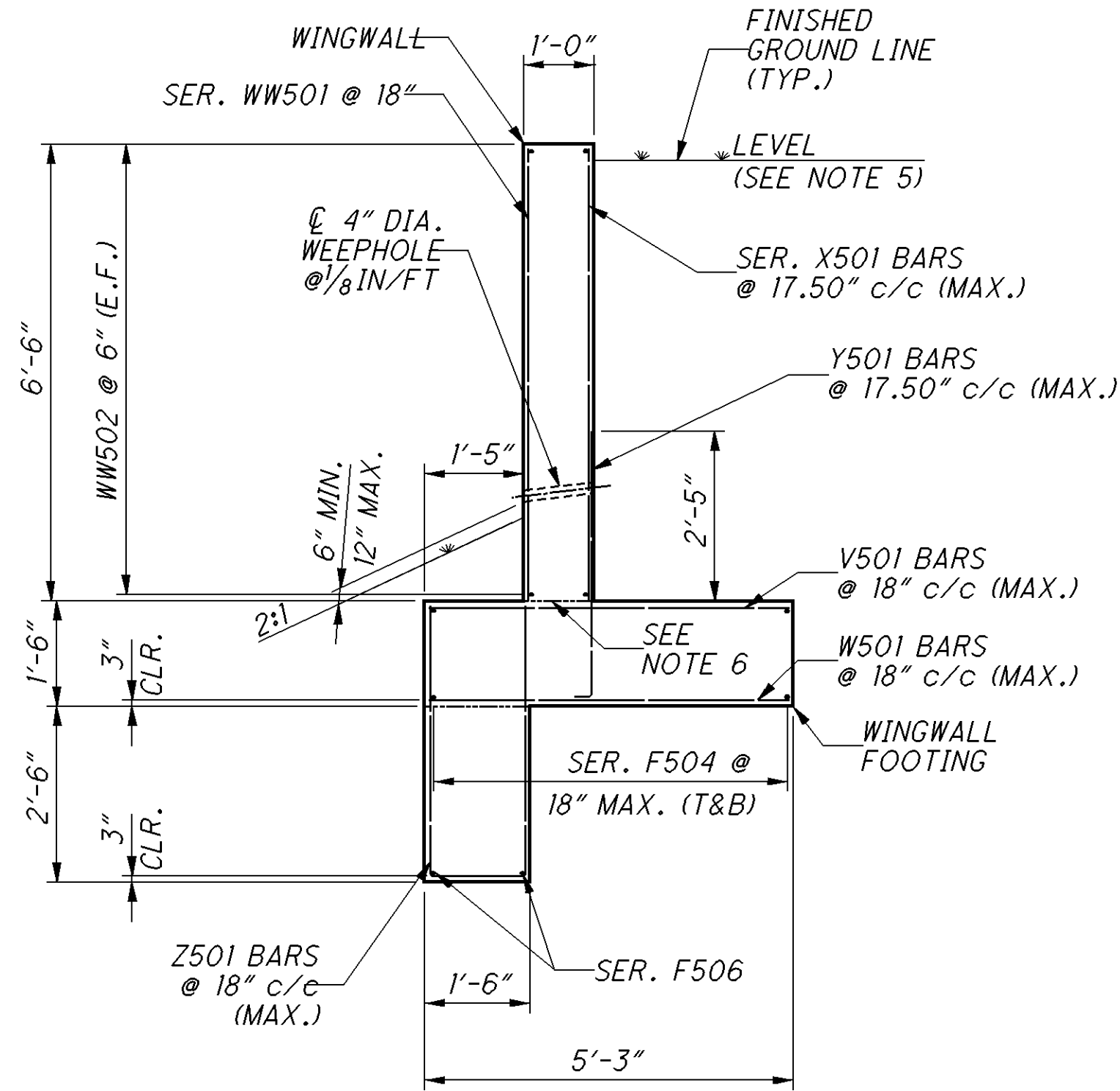
GENERAL NOTES AND QUANTITIES

GEA-700-0446
S.R. 700 OVER UNNAMED CREEK

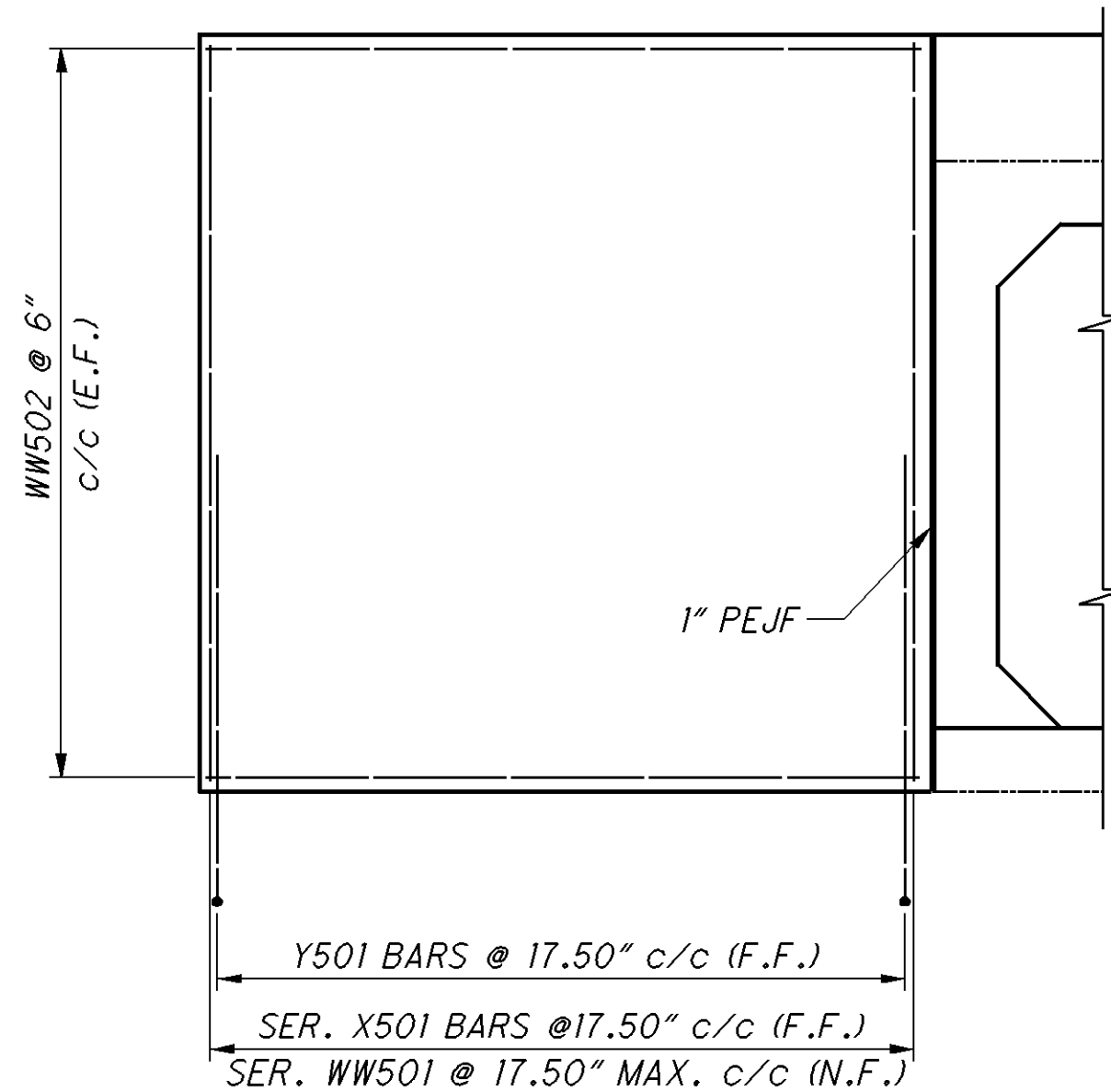
CUY -252-3.10/ VAR

2 / 6

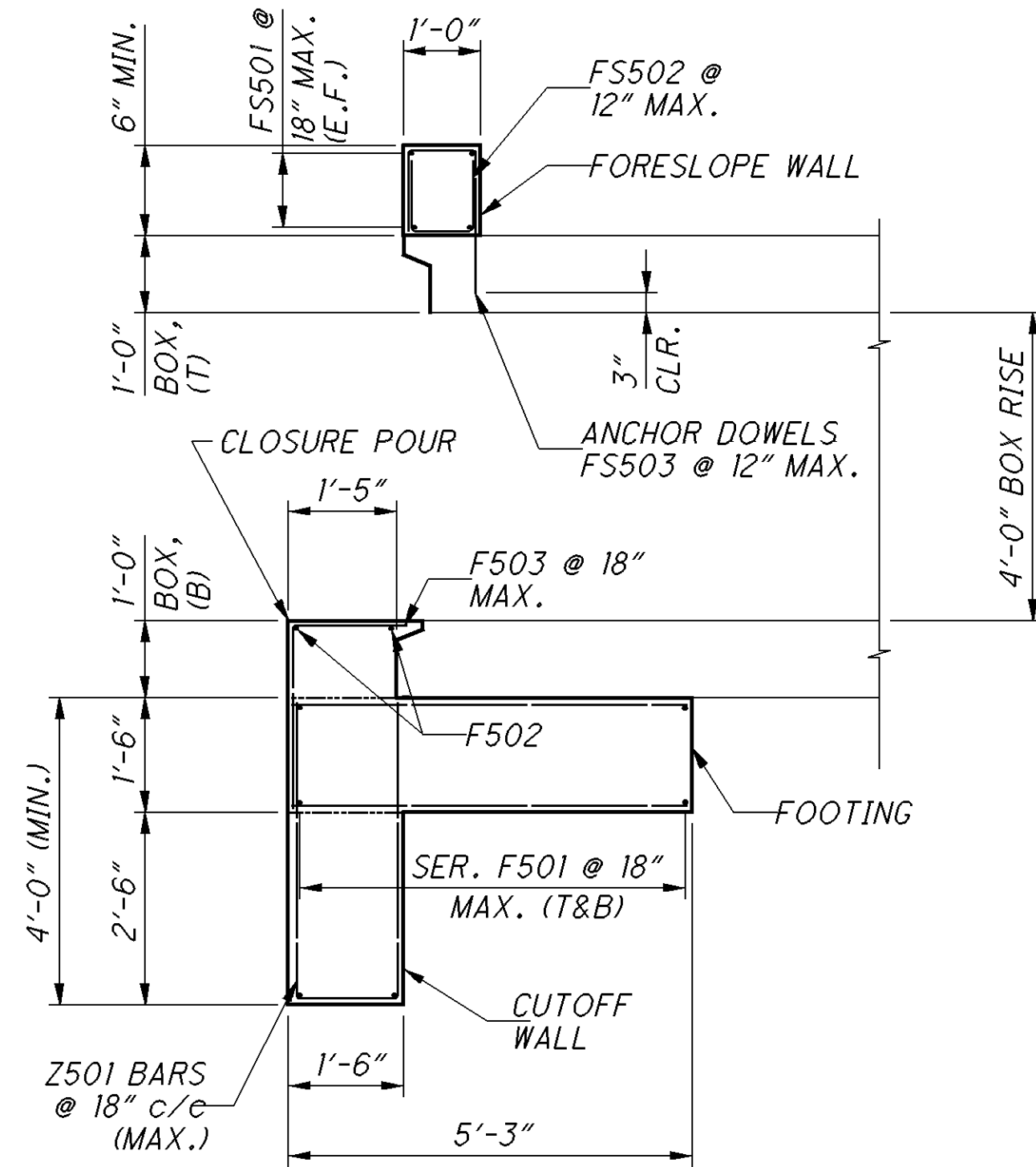
20A
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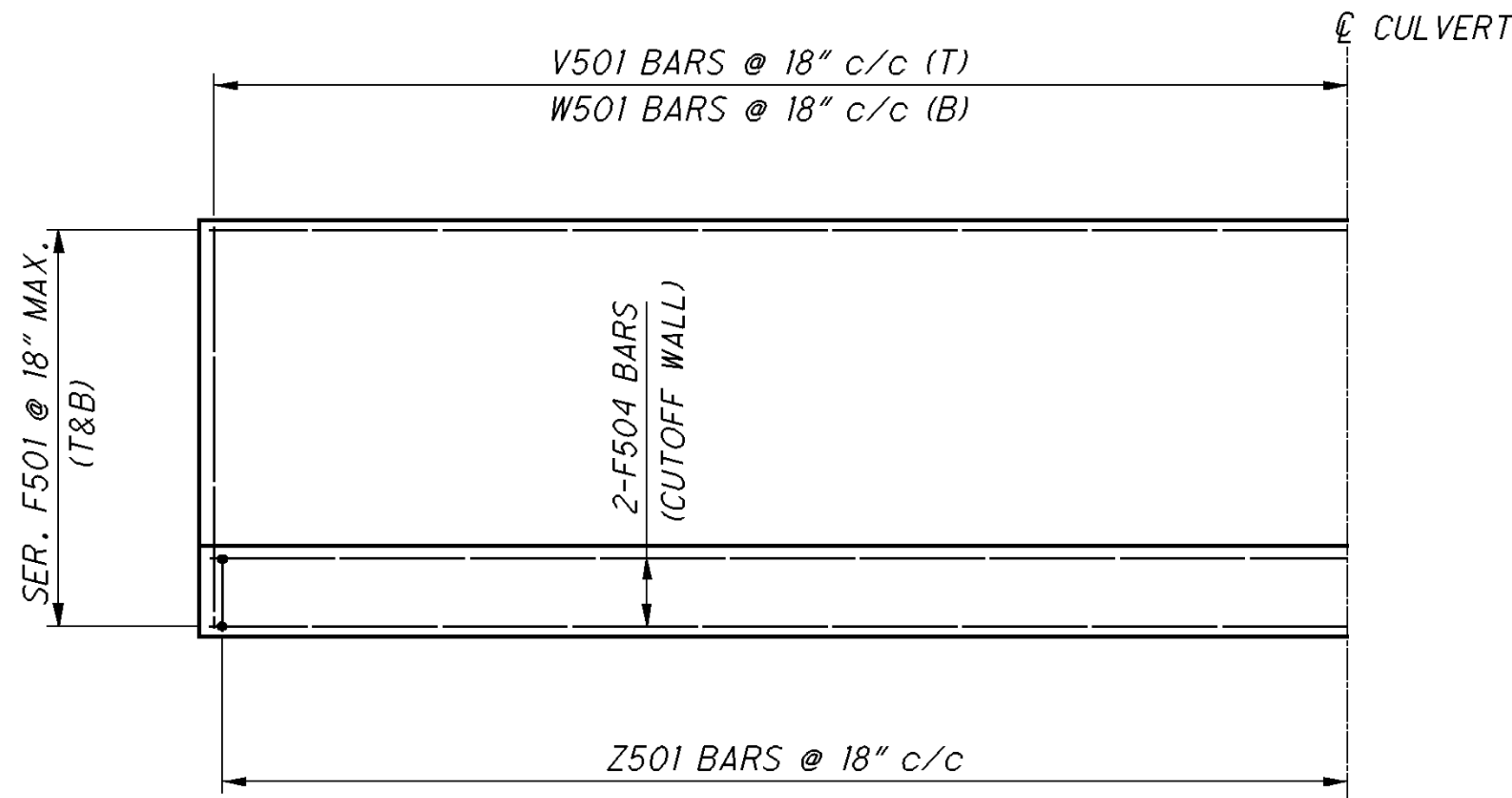
SECTION A-A
(POROUS BACKFILL NOT SHOWN FOR CLARITY)



VIEW E-E
TYPE C WINGWALL



SECTION B-B
INV. EL. 1113.94 (EAST)
INV. EL. 1113.51' (WEST)
(CULVERT INLET BEVEL SHOWN)



SECTION G-G
TYPE C WINGWALL

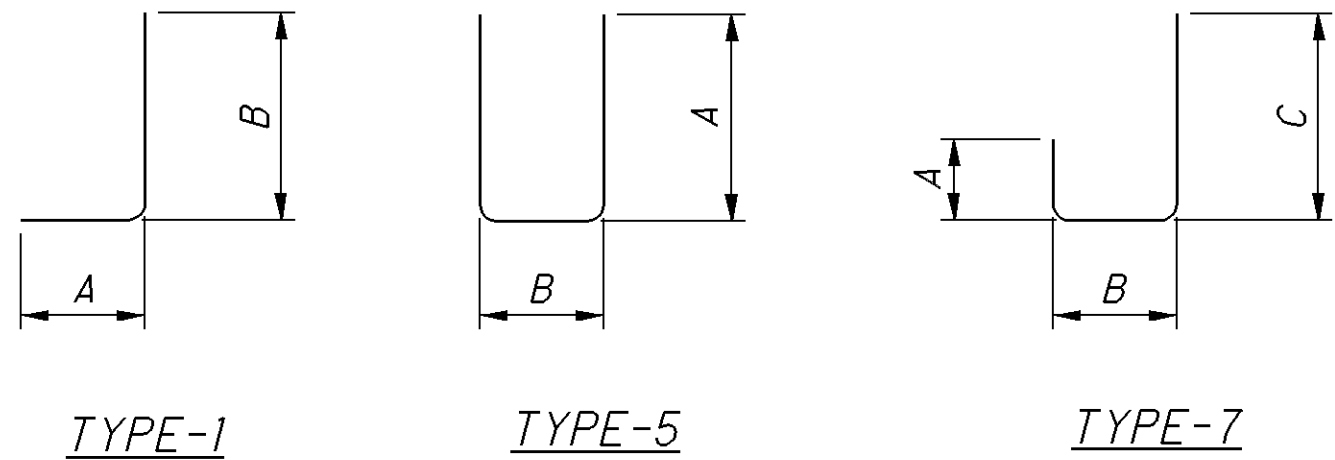
NOTES

1. FOR THE GENERAL NOTES SEE SHEET 2/6.
2. FOR THE LOCATIONS OF SECTIONS A-A AND B-B, SEE SHEET 3/6.
3. FOR THE LOCATION OF VIEW E-E, SEE SHEET 3/6.
4. FOR THE LOCATION OF SECTION G-G, SEE SHEET 3/6.
5. LEVEL SURFACE WITH 2 FOOT LIVE LOAD SURCHARGE IS FOR TYPE C WINGWALLS.
6. THE INTERFACE BETWEEN THE TOP OF FOOTING AND BASE OF WINGWALL STEM SHALL BE INTENTIONALLY ROUGHENED TO A FULL AMPLITUDE OF APPROXIMATELY 1/4" BY MEANS OF A SERRATED TROWEL.

I:\PROJECTS\PID85315\roadway\sheets\HMM\FTP_SUBMITTAL_3_2_12\700_0446CMD004.dgn 09-MAR-2012 10:44AM jgrmovse REVISED 6/4/12 BY JAG DESC ADDENDUM 1 - REVISED LMC QUANTITY

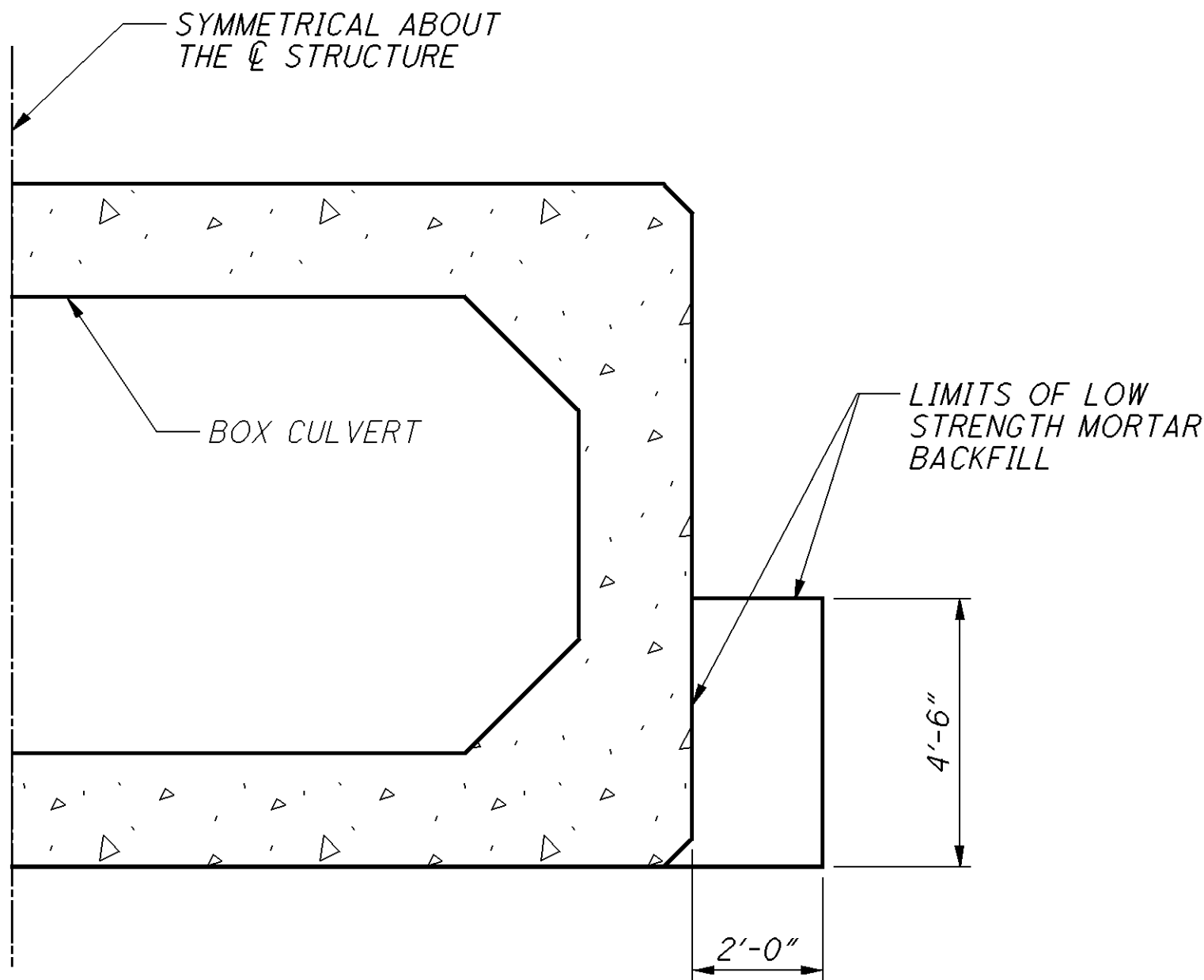
TYPE C HEADWALL REINFORCING SCHEDULE - EAST									
BAR MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	BAR TYPE DIMENSIONS				
					A		B		C
WINGWALLS									
X501	16	6'- 4"	106	STR.					
Y501	16	4'- 0"	68	1	0'- 6"	3'- 8"			
WW501	16	6'- 4"	106	STR.					
WW502	24	9'- 8"	242	STR.					
FOOTING & CUTOFF WALL									
V501	24	4'- 11"	124	STR.					
W501	24	4'- 11"	124	STR.					
Z501	24	8'- 2"	205	5	3'- 7"	1'- 2"			
F501	20	18'- 1"	378	STR.					
F502	4	18'- 1"	76	STR.					
F503	11	3'- 6"	41	1	1'- 5"	2'- 2"			
F504	2	13'- 8"	29	STR.					
FORESLOPE WALL									
FS501	4	13'- 8"	58	STR.					
FS502	15	0'- 9"	12	5	0'- 2"	0'- 8"			
FS503	15	1'- 8"	27	7	0'- 2"	0'- 8"	1'- 1"		
		TOTAL	1,596						

TYPE C HEADWALL REINFORCING SCHEDULE - WEST									
BAR MARK	NUMBER	LENGTH	WEIGHT (LBS.)	TYPE	BAR TYPE DIMENSIONS				
					A		B		C
WINGWALLS									
X501	16	6'- 4"	106	STR.					
Y501	16	4'- 0"	68	1	0'- 6"	3'- 8"			
WW501	16	6'- 4"	106	STR.					
WW502	24	9'- 8"	242	STR.					
FOOTING & CUTOFF WALL									
V501	24	4'- 11"	124	STR.					
W501	24	4'- 11"	124	STR.					
Z501	24	8'- 2"	205	5	3'- 7"	1'- 2"			
F501	20	18'- 1"	378	STR.					
F502	4	18'- 1"	76	STR.					
F503	11	3'- 6"	41	1	1'- 5"	2'- 2"			
F504	2	13'- 8"	29	STR.					
FORESLOPE WALL									
FS501	4	13'- 8"	58	STR.					
FS502	15	0'- 9"	12	5	0'- 2"	0'- 8"			
FS503	15	1'- 8"	27	7	0'- 2"	0'- 8"	1'- 1"		
		TOTAL	1,596						



ITEM 613 - LOW STRENGTH MORTAR BACKFILL:

LOW STRENGTH MORTAR BACKFILL SHALL BE PLACED AS SHOWN ON THIS SHEET. PAYMENT OF LOW STRENGTH MORTAR BACKFILL SHALL BE MADE ONLY FOR BACKFILL PLACED TO THE LIMITS SHOWN. THE EXCAVATION REQUIRED FOR THE PLACEMENT OF THE LSM SHALL BE INCLUDED IN ITEM 603 FOR PAYMENT.



ITEM 613 - LOW STRENGTH MORTAR BACKFILL:

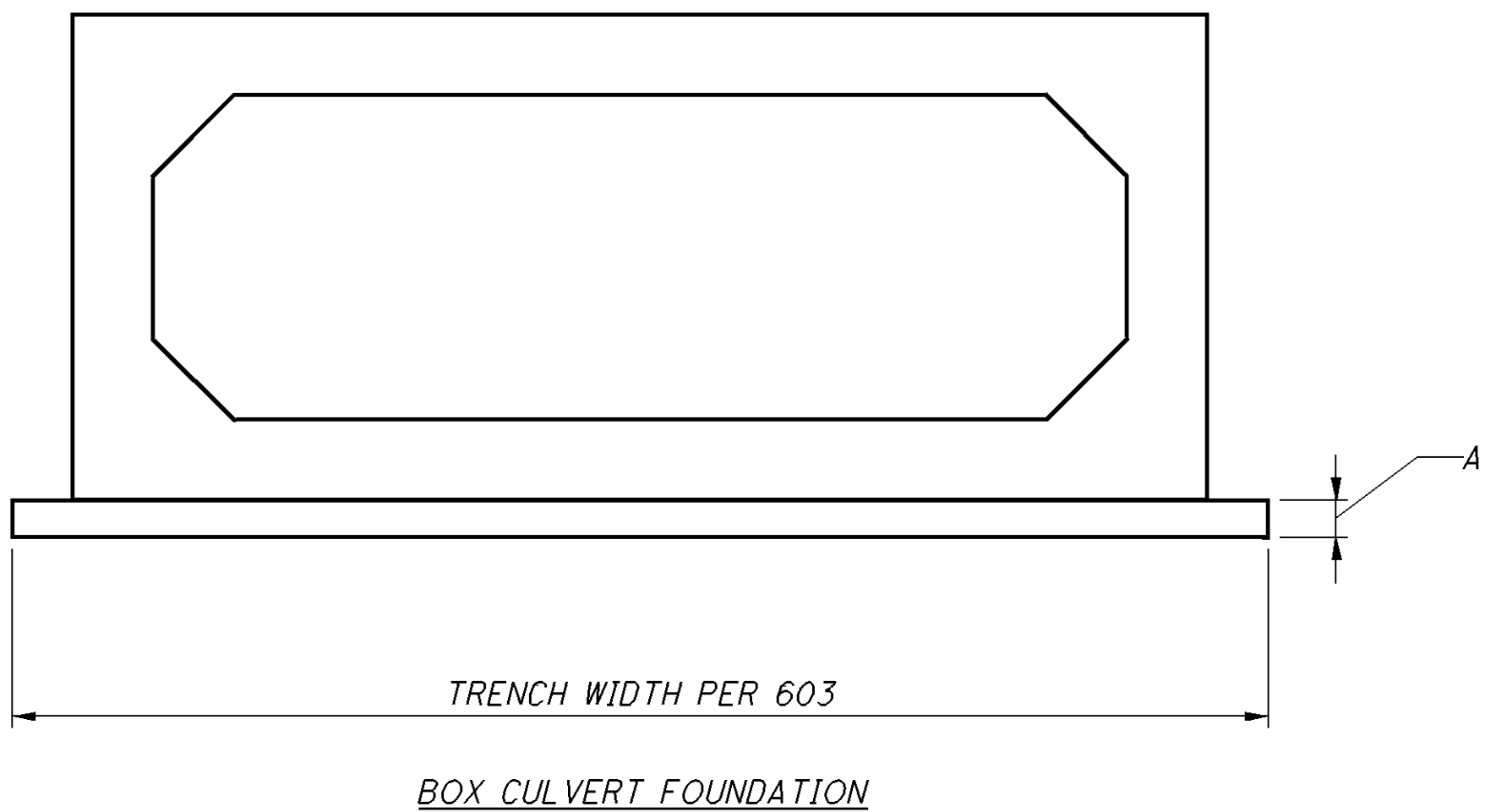
TO BE PLACED FROM END TO END OF POROUS BACKFILL.

CALCULATION:

$$[(2 \times 4.5) \times 36 \div 27 = 12 \text{ C.Y./SIDE}$$
$$12 \text{ C.Y.} \times 2 \text{ SIDES} = 24 \text{ C.Y.}$$

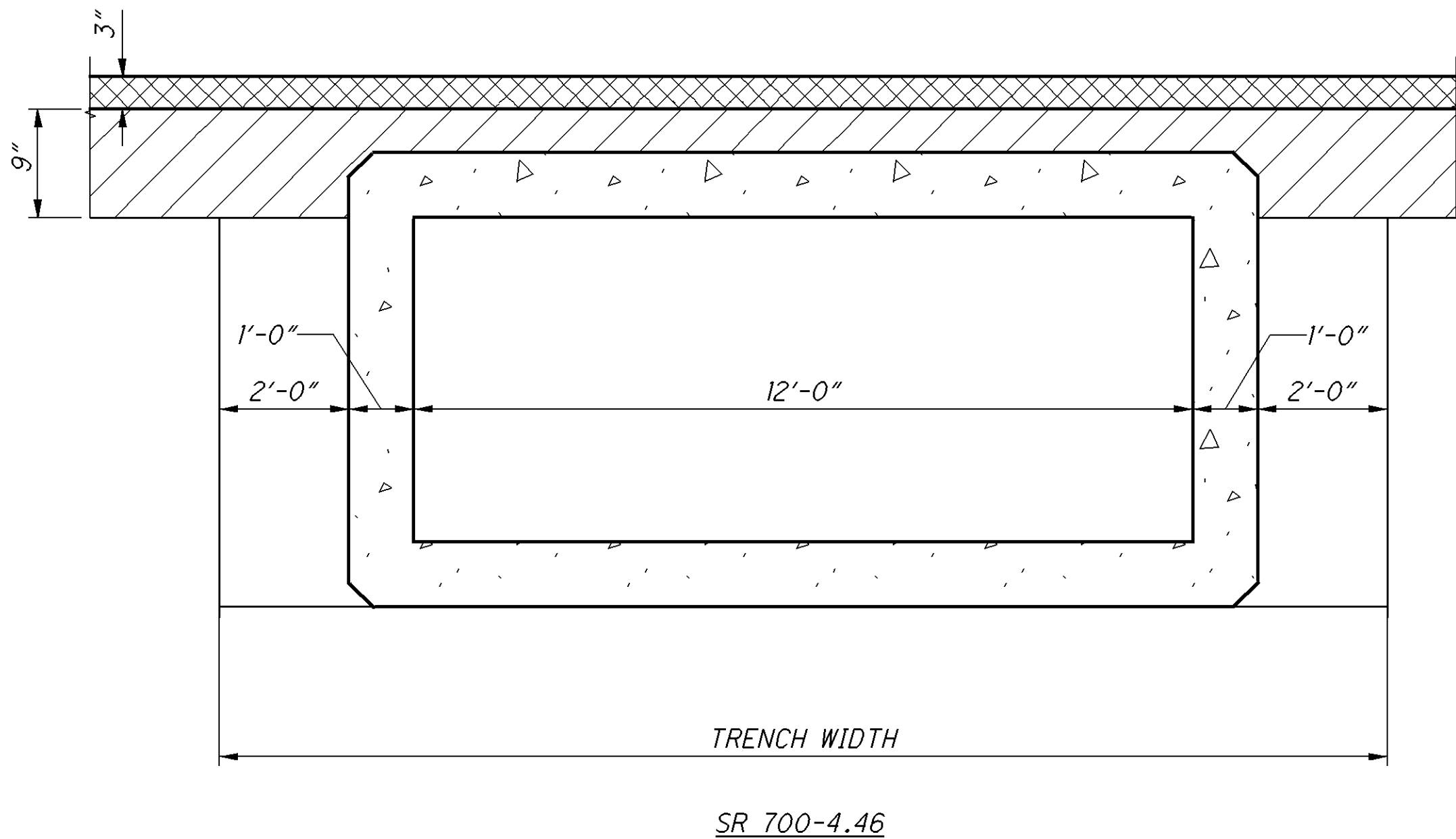
TOTAL CARRIED TO SHEET 14

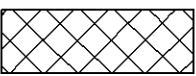
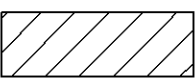
A = 6" BEDDING MINIMUM PER 603.



ITEM 503 - UNCLASSIFIED EXCAVATION:

EXCAVATION LIMITS FOR THE PROPOSED STRUCTURE SHALL BE AS DEFINED IN 503.09 EXCAVATION OUTSIDE THESE LIMITS NECESSARY TO REMOVE THE EXISTING STRUCTURE SHALL BE INCLUDED IN 202 PAYMENT.



-  1-1/2" ITEM 448, SURFACE COURSE, TYPE 1, PG64-22 APP
1-1/2" ITEM 448, INTERMEDIATE COURSE TYPE 1, PG64-22, SURFACE COURSE
-  9" ITEM 301 - ASPHALT CONCRETE BASE

REVISED 3/28/12 DESC PROJECT DESIGNATION BLOCK

REINFORCING LIST AND STRUCTURE DETAILS

GEA-700-0446

S.R. 700 OVER UNNAMED CREEK

CUY - 252 - 3.10 / VAR

5 / 6

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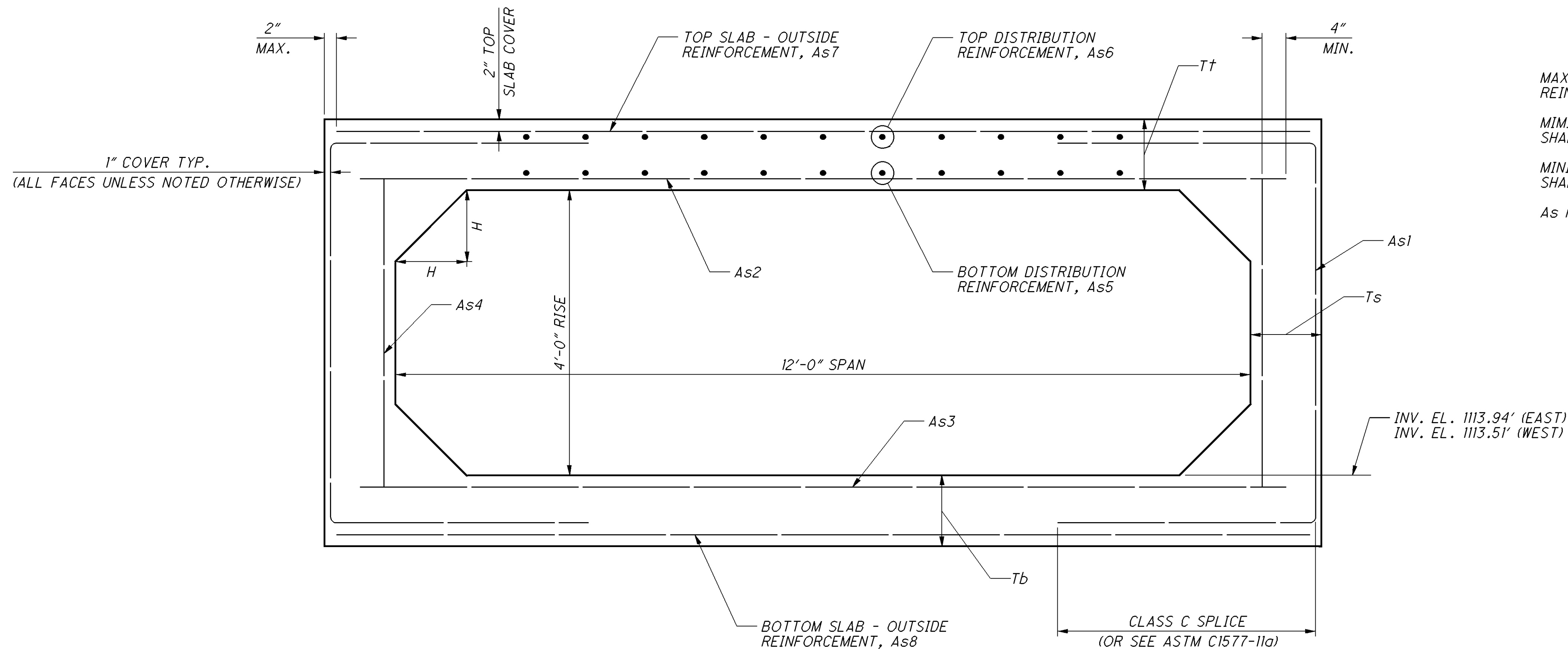
GEA-700-4.46

SFN 2802414

OHIO DEPARTMENT OF TRANSPORTATION
ITEM 603 - 12' x 4' CONDUIT TYPE A, 706.05,
AS PER PLAN ALL REQUIREMENTS OF 706.05
SHALL BE MET EXCEPT AS DETAILED HEREIN:

LOADING: HL-93
DEPTH OF COVER = 0-2'
FWS = 60 PSF

SPAN	12'
RISE	4'
Tt	12"
Tb	12"
Ts	12"
H	12"
As1	0.38 IN ² /FT
As2	0.31 IN ² /FT
As3	0.29 IN ² /FT
As4	0.29 IN ² /FT
As5	0.29 IN ² /FT
As6	0.29 IN ² /FT
As7	0.29 IN ² /FT
As8	0.29 IN ² /FT



MAXIMUM SPACING OF THE CIRCUMFERENTIAL
REINFORCING SHALL BE 4".

MINIMUM YIELD STRENGTH FOR REINFORCING
SHALL BE 60 KSI.

MINIMUM CONCRETE COMPRESSIVE STRENGTH
SHALL BE 5000 PSI.

As MIN = 0.002 x GROSS SECTION AREA

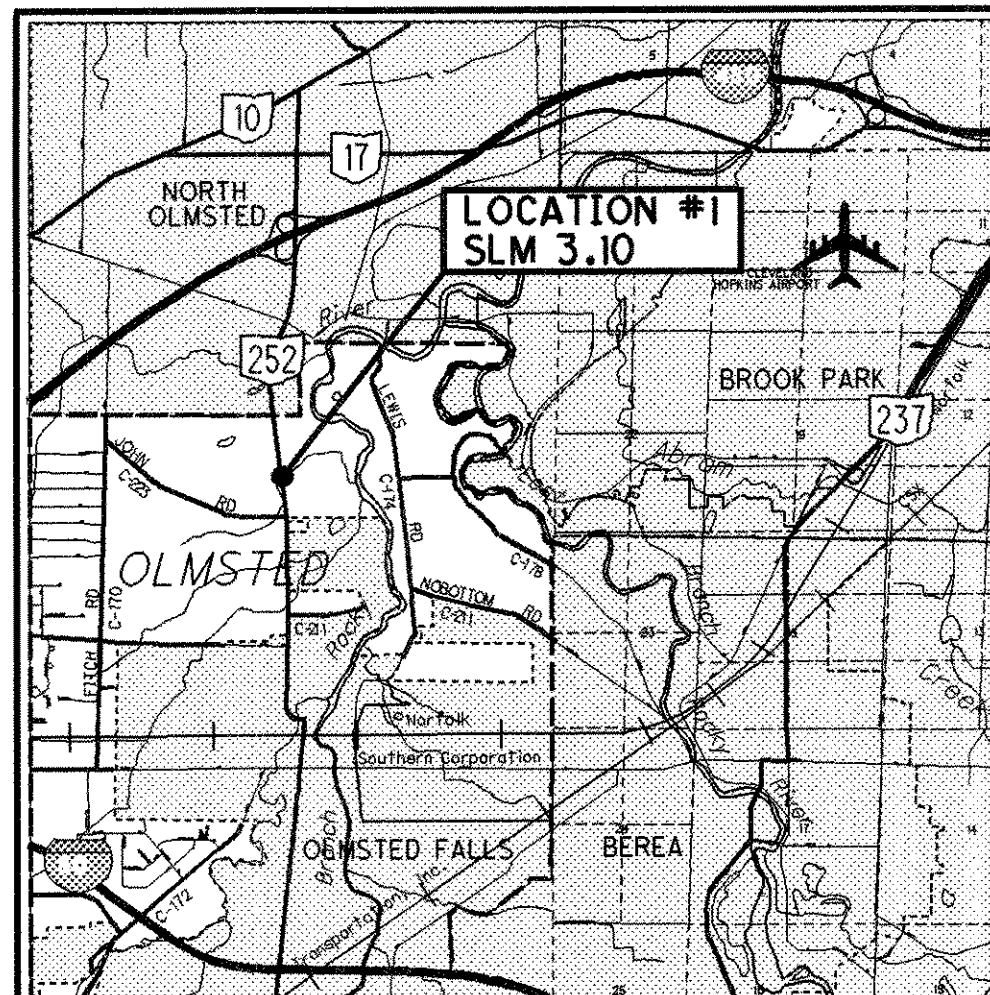
REVISED 3/28/12 DESC: PROJECT DESIGN BLOCK

DESIGNED	DRAWN	REVIEWED	DATE
AM	CM	CWP	02/23/12
CHECKED	REVISED	STRUCTURE FILE NUMBER	2802414
CF			

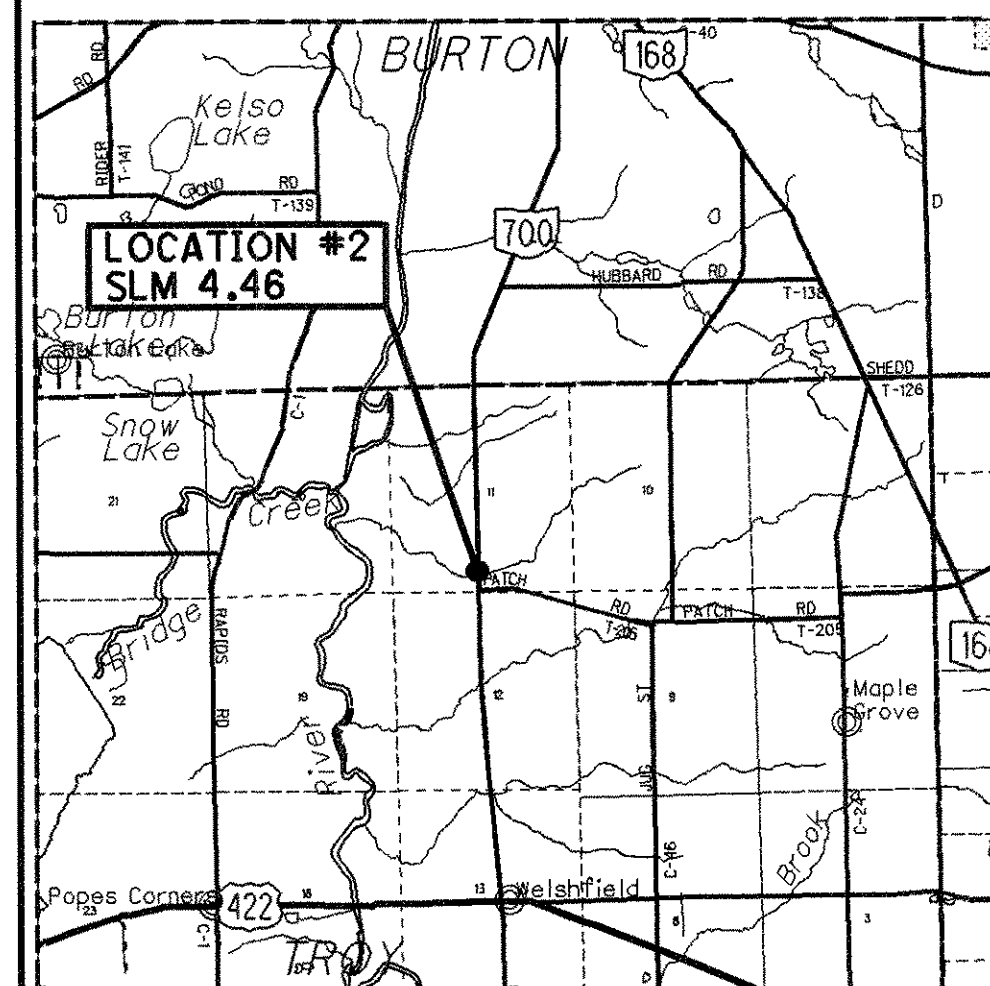
BOX CULVERT DESIGN
GEA-700-0446
S.R. 700 OVER UNNAMED CREEK

CUY - 252 - 3.10 / VAR

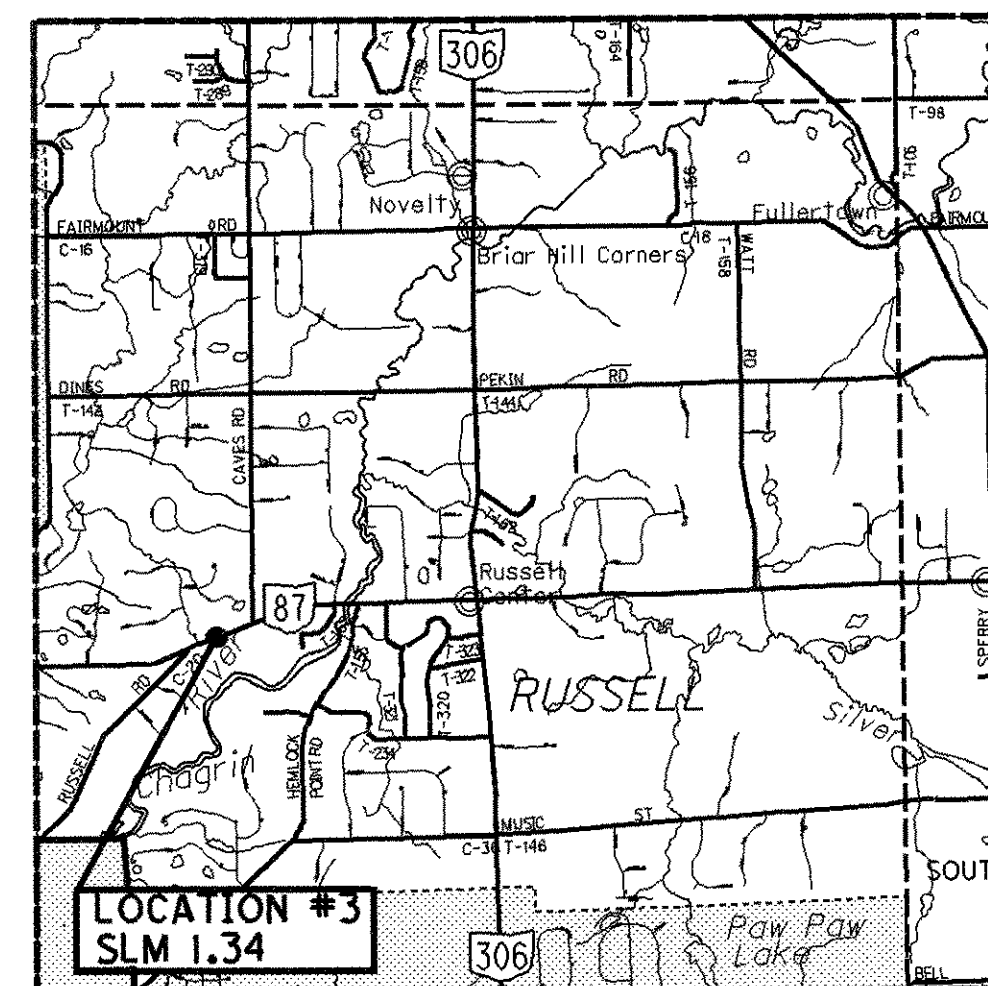
RIGHT OF WAY LEGEND SHEET CUY-252-3.10/ VAR



LATITUDE: N41°23'41" LONGITUDE: W81°54'18"



LATITUDE: N41°24'48" LONGITUDE: W81°24'03"



LATITUDE: N41°27'41" LONGITUDE: W81°21'59"

CUYAHOGA COUNTY
OLMSTED TOWNSHIP
O.L. 26, T. 6 N, R. 15 W

GEAUGA COUNTY
TROY TOWNSHIP
SEC. 11, T. 6 N, R. 7 W

GEAUGA COUNTY
RUSSELL TOWNSHIP
LOTS 6 & 7, TRACT 2
T. 7 N, R. 9 W

PROJECT DESCRIPTION

THIS PROJECT INCLUDES THE REPLACEMENT OF THREE (3) ROADWAY CULVERTS AND HEADWALLS WITH PAVEMENT RESTORATION AND MINOR GUARDRAIL WORK.

PROJECT CONTROL

ASSUMED COORDINATES FOR PROJECT USE ONLY.

PLANS PREPARED BY:

FIRM NAME: OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 12

R/W DESIGNER: LAURIE L. SCARMUZZI

R/W REVIEWER: THOMAS M. STANZIALE, P.S.

FIELD REVIEWER: SCOTT F. RAYPHOLTZ, P.S. / LAURIE L. SCARMUZZI

PRELIMINARY FIELD REVIEW DATE: 11/23/2010

TRACINGS FIELD REVIEW DATE: 3/2/2011 - 3/3/2011

OWNERSHIP UPDATED BY: THOMAS M. STANZIALE, P.S.

DATE COMPLETED: 4/18/2011

PLAN COMPLETION DATE: 4/29/2011

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING

LEGEND

- SH = STANDARD HIGHWAY EASEMENT
- S = SEWER EASEMENT
- CH = CHANNEL EASEMENT
- T = TEMPORARY EASEMENT

CONVENTIONAL SYMBOLS

County Line	Gas Line (Ex)
Township Line	Telecomm Fiber Optic (Ex)
Section Line	Ditch / Creek (Ex)
Corporation Line	Ditch / Creek (Pr)
Fence Line (Ex)	Tree Line (Ex)
Center Line	Ownership Hook Symbol
Right of Way (Ex)	Property Line Symbol
Right of Way (Pr)	Break Line Symbol
Standard Highway Ease.(Ex)	Tree (Pr)
Standard Highway Ease.(Pr)	Tree (Ex)
Temporary Right of Way	Tree (Remove)
Channel Ease. (Pr)	Shrub (Remove)
Utility Ease. (Ex)	Evergreen (Ex)
Sewer Ease. (Pr)	Evergreen (Remove)
Railroad	Stump
Guardrail (Ex)	Wetland (Pr)
Construction Limits	Grass (Pr)
Edge of Pavement (Ex)	Aerial Target
Edge of Shoulder (Ex)	Post (Ex)
Drainage Culvert (Ex)	Mailbox (Ex)
	Light (Ex)
	Telephone Marker (Ex)
	Fire Hydrant (Ex)
	Water Meter (Ex)
	Water Valve (Ex)
	Utility Valve Unknown (Ex)
	Telephone Pole (Ex)
	Power Pole (Ex)
	Light Pole (Ex)

INDEX OF SHEETS:

LEGEND SHEETS	1 - 2
PROPERTY MAPS	3 - 5
SUMMARY OF ADDITIONAL R/W	6 - 8
R/W TOPOGRAPHIC	9, 12, 14
R/W BOUNDARY	10, 11, 13, 15

I, Thomas M. Stanziale, P.S. have established the proposed property lines, calculated the Gross Take, present roadway occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire the parcels as shown herein.

As a part of this work I have set the monuments at the proposed Property corners, Section Corners and other points as shown herein.

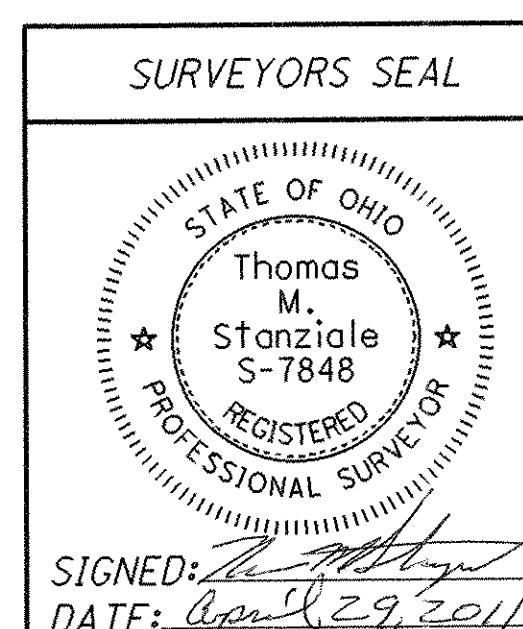
The iron pins and caps will be set after completion of construction by ODOT.
This work will be done in accordance with OAC 4733-37 as cited below.

All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "A Minimum Standards for Boundary Surveys in the State of Ohio" unless noted.

The words I and my as used herein are to mean either myself or someone working under my direct supervision.

Thomas M. Stanziale
Thomas M. Stanziale, Professional Land Surveyor 7848

Date: April 29, 2011



FEDERAL PROJECT NO.
NON-FEDERAL

PID NO.
85315

RIGHT OF WAY
LEGEND SHEET

CUY-252-3.10/ VAR

1 / 15

21
35

RIGHT OF WAY
LEGEND SHEET
UTILITY OWNERS

CUY-252-3.10

AT&T
13630 LORAIN AVE - 4TH FLOOR
CLEVELAND, OHIO 44111
ATTN: JAMES JANIS
PHONE: 216-476-6142
FAX: 216-476-6013

CITY OF CLEVELAND-DIVISION OF WATER
1201 LAKESIDE AVE
CLEVELAND, OHIO 44111
ATTN: GUY SINGER
PHONE: 216-664-2444 EXT.5555
FAX: 216-664-2378

COLUMBIA GAS OF OHIO - NISource
7080 FRY ROAD
MIDDLEBURG HTS, OHIO 44130
ATTN: DAN SUREN
PHONE: 440-891-2428
FAX: 440-891-2477

CUYAHOGA COUNTY SANITARY ENGINEER
6100 WEST CANAL ROAD
VALLEY VIEW, OHIO 44125
ATTN: MICHAEL DEUER
PHONE: 216-443-8205
FAX: 216-443-8236

DOMINION EAST OHIO GAS COMPANY
320 SPRINGSIDE DRIVE
FAIRLAWN, OHIO 44333
ATTN: MIKE ANTONIUS
PHONE: 330-664-2488

ILLUMINATING COMPANY
6896 MILLER ROAD
BRECKSVILLE, OHIO 44141
ATTN: MARK ROBINSON
PHONE: 440-717-6845
FAX: 440-546-8780

TIME WARNER CABLE
14300 SOUTH INDUSTRIAL PARKWAY
MAPLE HTS, OHIO 44137
ATTN: KIP EIGER
PHONE: 216-663-4003
FAX: 216-381-3262

WIDE OPEN WEST OHIO, LLC
8868 RIDGE ROAD
NORTH ROYALTON, OHIO 44133
ATTN: CHRIS HARROLD
PHONE: 440-582-6020
FAX: 440-582-6006

GEA-700-4.46

AT&T
13630 LORAIN AVE - 4TH FLOOR
CLEVELAND, OHIO 44111
ATTN: JAMES JANIS
PHONE: 216-476-6142
FAX: 216-476-6013

BELDON & BLAKE
1748 SALTWELL ROAD
DOVER, OHIO 44622
PHONE: 440-866-5551

DOMINION EAST OHIO GAS COMPANY
320 SPRINGSIDE DRIVE
FAIRLAWN, OHIO 44333
ATTN: MIKE ANTONIUS
PHONE: 330-664-2488

ILLUMINATING COMPANY
6896 MILLER ROAD
BRECKSVILLE, OHIO 44141
ATTN: MARK ROBINSON
PHONE: 440-717-6845
FAX: 440-546-8780

GEA-87-1.34

DOMINION EAST OHIO GAS COMPANY
320 SPRINGSIDE DRIVE
FAIRLAWN, OHIO 44333
ATTN: MIKE ANTONIUS
PHONE: 330-664-2488

ILLUMINATING COMPANY
6896 MILLER ROAD
BRECKSVILLE, OHIO 44141
ATTN: MARK ROBINSON
PHONE: 440-717-6845
FAX: 440-546-8780

NORTHEASTERN ITS
SPREAD NETWORK
800 WOODLANDS PARKWAY, SUITE 118
RIDGELAND, MISSISSIPPI 39157
ATTN: DANA COSTA
PHONE: 513-254-4348
dana.costa@spreadnetworks.com
ATTN: JOHN BRUCE
OFFICE PHONE: 724-373-8451
CELL PHONE: 770-814-1791
john.bruce@spreadnetworks.com

OSP ENGINEERING (ALONG NORTHEASTERN ITS LINES)
5524 BEE CAVE RD, C-1
AUSTIN, TEXAS 78746
ATTN: DANA T. COSTA
PHONE: 513-254-4348
OSP FIELD TECHNICIAN
2797 HAMILTON AVE
CLEVELAND, OHIO 44114
ATTN: MARK BURNSIDE
PHONE: 216-589-9364

TIME WARNER CABLE
14300 SOUTH INDUSTRIAL PARKWAY
MAPLE HTS, OHIO 44137
ATTN: KIP EIGER
PHONE: 216-663-4003
FAX: 216-381-3262

WINDSTREAM WESTERN RESERVE
245 NORTH MAIN ST.
HUDSON, OHIO 44236
ATTN: RICK ANDREGO
PHONE: 440-993-1621
FAX: 440-993-1750

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

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL

1-800-362-2764

(TOLL FREE)

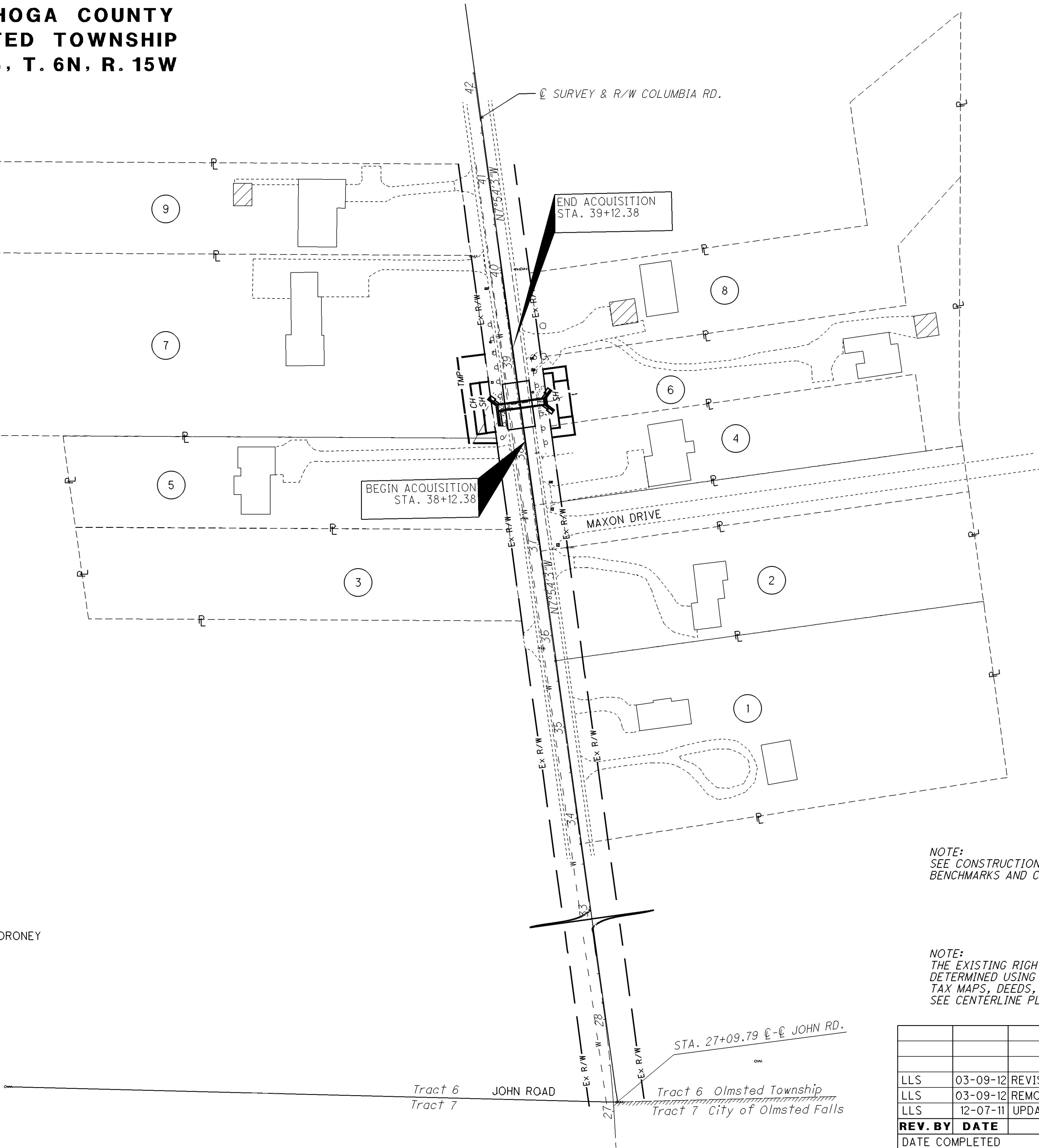
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: 1-800-925-0988

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CUYAHOGA COUNTY
OLMSTED TOWNSHIP
O.L. 26, T. 6N, R. 15W

TABLE OF OWNERSHIP	
1	MARK E. & KRIS M. DAVIS 6651 COLUMBIA RD. PPN: 261-01-023
2	ROBERT J. STONE 6635 COLUMBIA RD. PPN: 261-01-009
3	BUTTERNUT RIDGE PROP LTD PPN: 262-07-021, 262-07-016
4	NORTH COAST COMMUNITY HOMES, INC. 6597 COLUMBIA RD. PPN: 261-01-013
5	JACK G. & SHARON L. STIPEK 6550 COLUMBIA RD. PPN: 262-07-022
6	FEDERAL HOME LOAN MORTGAGE CORPORATION 6547 COLUMBIA RD. PPN: 261-01-012
7	CAROLE JO HANZES MORONEY AND DAVID F. MORONEY AND ROGER M. HANZES 6540 COLUMBIA RD. PPN: 262-07-017
8	JAMES E. BORLAND 6525 COLUMBIA RD. PPN: 261-01-007
9	PAUL K. & PATRICIA L. FULKROAD 6520 COLUMBIA RD. PPN: 262-07-018



NOTE:
SEE CONSTRUCTION PLAN SHEET 9 FOR
BENCHMARKS AND CENTERLINE REFERENCES.

NOTE:
THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE
DETERMINED USING THE FOLLOWING DOCUMENTATION:
TAX MAPS, DEEDS, PLATS.
SEE CENTERLINE PLAT FOR DETAILS.

REV. BY	DATE	DESCRIPTION
LLS	03-09-12	REVISED PROPOSED CULVERT
LLS	03-09-12	REMOVED BEGIN/END "PROJECT" FLAGS
LLS	12-07-11	UPDATED OWNERSHIP FOR PARCEL 6.
DATE COMPLETED		

CUY-252-03.10/ VAR

3 / 15

23 / 35

PROPERTY MAP
CULVERT

CUY-252-3.10

R/W DESIGNER
LLS

R/W REVIEWER
TMS

PID NO.
85315

0 30 60 120

HORIZONTAL
SCALE IN FEET

↑

2

GEAUGA COUNTY
TROY TOWNSHIP
SEC. 11, T. 6N, R. 7W

-
- 17 16695 CLARIDON TROY RD
32-030000
- POT Sta. 27+24.08
- VIXON RD
- POT Sta. 26+25.52
- 16 16737 CLARIDON TROY RD
32-074013
- POT Sta. 23+75.52
- 15 16755 CLARIDON TROY RD
32-008600
- PI Sta. 22+25.52
- CL R/W CLARIDON TROY RD
- 14 16817 CLARIDON TROY RD
32-008200
- END PROJECT
END ACQUISITION
STA. 14+21.29
- BEGIN PROJECT
BEGIN ACQUISITION
STA. 13+26.29
- PI Sta. 15+98.97
- 13 16855 CLARIDON-
TROY RD
32-068600
- POT Sta. 14+48.97
- POT Sta. 13+71.29
- POT Sta. 13+23.40
- POT Sta. 12+26.30
- POND
- 12
- 11
- CLARIDON TROY RD
- POT Sta. 10+00.00
- PATCH RD.
- POT Sta. 8+76.30
- POT Sta. 7+26.30
- 13872 PATCH RD
32-059000
- 13910 PATCH RD
32-055800
- 13920 PATCH RD
32-028900
- 13940 PATCH RD
32-028300
- 13960 PATCH RD
32-074158
- 32-074159
- 32-008360
- 32-008500
- 32-074169
- 32-074170
- 32-074168

NOTE: SEE CONSTRUCTION PLAN SHEET 9 FOR
BENCHMARKS AND CENTERLINE REFERENCES.

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		



PID NO.
85315

R/W DESIGNER	LLS
R/W REVIEWER	TMS

PROPERTY MAP
GEA-87-1.34 CULVERT

CUY-252-3.10/ VAR

5	15
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21 GEORGE & MILDRED KSENYAK
7690 KINSMAN RD.
PPN: 26-090580

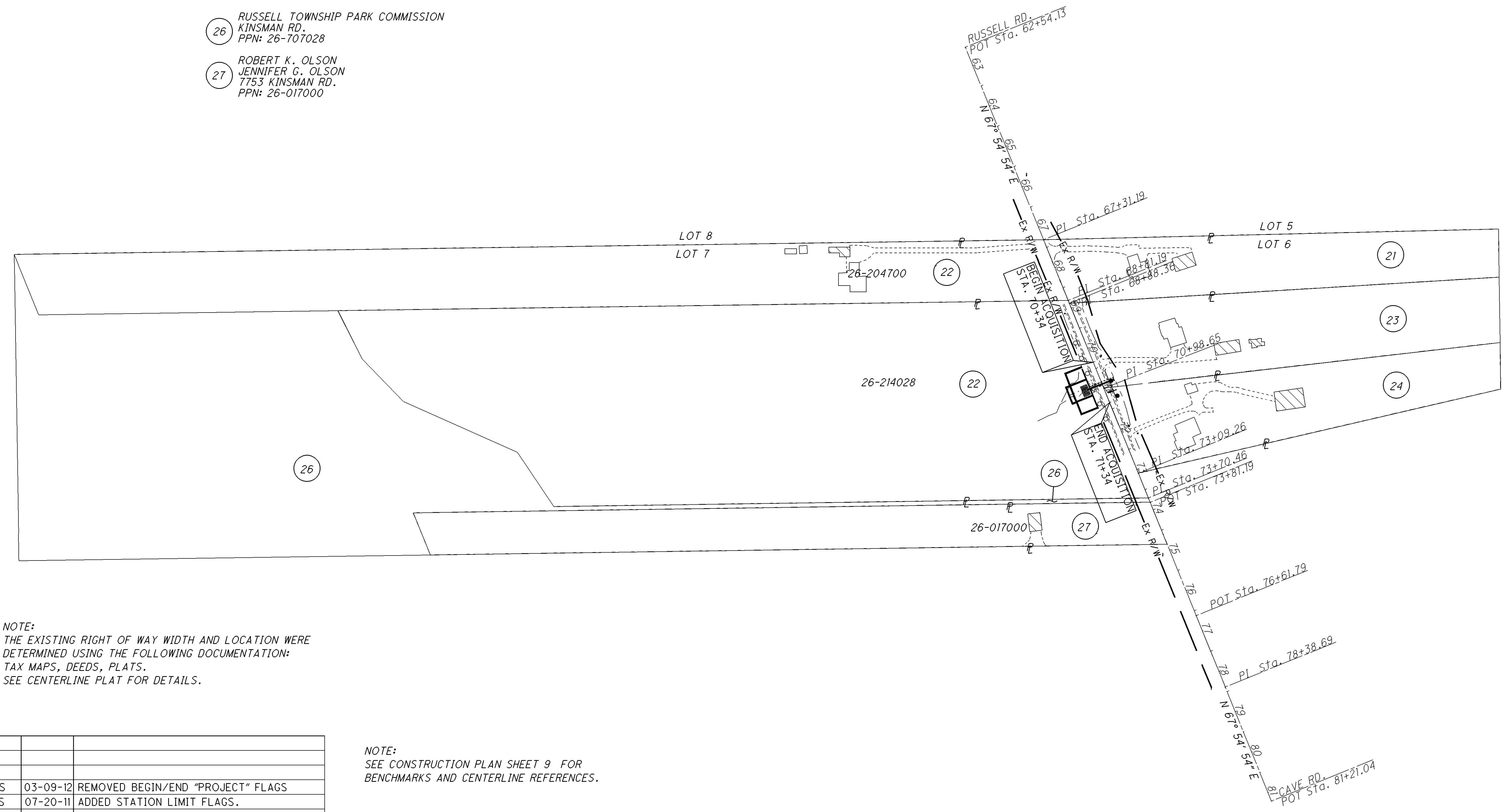
22 AARON A. & VILUNA JENNINGS
7691 KINSMAN RD.
PPN: 26-204700, 26-214028

23 JOE & MARY KOSKY, CO-TRUSTEES
7708 KINSMAN RD.
PPN: 26-092700

24 MATTHEW W. MULDOON
KATHERYN E. MULDOON
7728 KINSMAN RD.
PPN: 26-190800

26 RUSSELL TOWNSHIP PARK COMMISSION
KINSMAN RD.
PPN: 26-707028

27 ROBERT K. OLSON
JENNIFER G. OLSON
7753 KINSMAN RD.
PPN: 26-017000



NOTE:
SEE CONSTRUCTION PLAN SHEET 9 FOR
BENCHMARKS AND CENTERLINE REFERENCES

LLS	03-09-12	REMOVED BEGIN/END "PROJECT" FLAGS
LLS	07-20-11	ADDED STATION LIMIT FLAGS.
LLS	07-20-11	REVISED PIPE, HEADWALL AND GABION WALL
REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

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4 OWNERSHIPS
10 PARCELS
0 TOTAL TAKES
0 OWNERSHIPS WITH STRUCTURES INVOLVED

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME
OF THE OHIO DEPARTMENT OF TRANSPORTATION
UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD		AUDITOR'S PARCEL	RECORD AREA (SQ.FT.)	TOTAL P.R.O. (SQ. FT.)	GROSS TAKE (SQ. FT.)	P.R.O. IN TAKE (SQ. FT.)	NET TAKE (SQ. FT.)	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED	
			BOOK	PAGE								LEFT	RIGHT			BOOK	PAGE
1	MARK E. & KRIS M. DAVIS		15891	60	261-01-023	87,991								STATE	NO R/W REQUIRED.		
2	ROBERT J. STONE		200606230766		261-01-009	53,143								STATE	NO R/W REQUIRED.		
3	BUTTERNUT RIDGE PROP LTD	3, 9-11	3790	16	262-07-021	47,044								STATE	NO R/W REQUIRED.		
			3790	19	262-07-016	124,581											
4-SH	NORTH COAST COMMUNITY HOMES, INC.	3, 9-11	200409140718		261-01-013	33,297		26		26				STATE	TO CONSTRUCT & MAINTAIN A CULVERT.	201108310198	
4-T								289		289				STATE	TO CONSTRUCT A CULVERT AND PERFORM GRADING.		
5-T	JACK G. & SHARON L. STIPEK	3, 9-11	95-07407	49	262-07-022	47,044		153		153				STATE	TO CONSTRUCT A CULVERT AND PERFORM GRADING.		
6-SH	FEDERAL HOME LOAN MORTGAGE CORPORATION	3, 9-11	20111102506		261-01-012	42,645		574		574				STATE	TO CONSTRUCT & MAINTAIN A CULVERT.	201112150212	
6-CH								600		600				STATE	TO CONSTRUCT AND MAINTAIN A CHANNEL.		
6-T1								110		110				STATE	TO CONSTRUCT A CULVERT AND PERFORM GRADING.	201112150213	
6-T2								275		275				STATE	TO CONSTRUCT A CULVERT AND PERFORM GRADING.		
	(TOTAL T1 + T2)							385		385							
7-SH	CAROLE JO HANZES MORONEY	3, 9-11	200410070792		262-07-017	153,766		550		550				STATE	TO CONSTRUCT & MAINTAIN A CULVERT.	201110040395	
	DAVID F. MORONEY		8637	51													
	ROGER M. HANZES																
7-CH								550		550				STATE	TO CONSTRUCT AND MAINTAIN A CHANNEL.		
7-T								1613		1613				STATE	TO CONSTRUCT A CULVERT AND PERFORM GRADING.		
8	JAMES E. BORLAND	3, 9-11	1350	20	261-01-007	49,684								STATE	NO R/W REQUIRED.		
			1366	49													
9	PAUL K. & PATRICIA L. FULKROAD		200702020435		262-07-018	76,230								STATE	NO R/W REQUIRED.		
10	NOT USED																

NOTE: ALL TEMPORARY PARCELS TO BE OF 12 MONTH DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

LEGEND

SH = STANDARD HIGHWAY EASEMENT
CH = CHANNEL EASEMENT
T = TEMPORARY EASEMENT

* DENOTES R/W ENCROACHMENT

LLS	02-27-12	ADDED "AS ACQUIRED" INFO.
LLS	02-27-12	UPDATED OWNERS RECORD FOR PARCEL 7.
LLS	02-27-12	ADDED SHEET NUMBERS IN SUMMARY TABLE.
LLS	12-7-11	UPDATED OWNERSHIP INFO. FOR PARCEL 6.
REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

FEDERAL PROJECT NO.

PID NO.

STATE JOB NO.

Summary of Additional Right of Way Location #1 (CUY-252-3.10)

CUY-252-3.10/ VAR

85315

520135

26

35

15

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- 1 OWNERSHIP
- 3 PARCELS
- 0 TOTAL TAKES
- 0 OWNERSHIPS WITH STRUCTURES INVOLVED

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME
OF THE OHIO DEPARTMENT OF TRANSPORTATION
UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD		AUDITOR'S PARCEL	RECORD AREA (SQ.FT.)	TOTAL P.R.O. (SQ.FT.)	GROSS TAKE (SQ.FT.)	P.R.O. IN TAKE (SQ.FT.)	NET TAKE (SQ.FT.)	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED	
			BOOK	PAGE								LEFT	RIGHT			BOOK	PAGE
11	NORMAN MILLER	4, 12-13	1880	1859	32-074356	218,236								STATE	NO R/W REQUIRED.		
12	EDWIN J. URBANOWICZ	4, 12-13	1635	759	32-068600	108,900								STATE	NO R/W REQUIRED.		
13-CH	RICHARD S. & MARY D. LAMBERT	4, 12-13	1851	1437	32-072600 32-074201	875,556		700 0		700 0				STATE	TO CONSTRUCT AND MAINTAIN A CHANNEL.	O.R. 1912	1362-1366
13-T1					32-072600			600		600				STATE	TO CONSTRUCT A CULVERT AND PERFORM GRADING.		
13-T2					32-072600			600		600				STATE	TO CONSTRUCT A CULVERT AND PERFORM GRADING.		
	(TOTAL T1 + T2)							1200		1200							
14	JAMES ALLEN & SANDRA BURZANKO	4, 12-13	1789	2453	32-008200	2,590,513								STATE	NO R/W REQUIRED. * SANDSTONE WALL ENCROACHMENT		
15	ROBERT W. & MINA JUNE BURZANKO ROBERT R. & AMY E. BURZANKO		1849	121	32-008600	90,169								STATE	NO R/W REQUIRED.		
16	ALAN G. & CANDICE R. MUTZ		830	322	32-074013	160,301								STATE	NO R/W REQUIRED.		
17	MARK J. & JANET K. HESS		1273	563	32-030000	110,207								STATE	NO R/W REQUIRED.		
18-20	NOT USED																

NOTE: ALL TEMPORARY PARCELS TO
BE OF 12 MONTH DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY
EASEMENTS TO BE USED FOR STORAGE OF
MATERIAL OR EQUIPMENT BY THE CONTRACTOR
UNLESS NOTED OTHERWISE.

LEGEND

CH = CHANNEL EASEMENT
T = TEMPORARY EASEMENT

* DENOTES R/W ENCROACHMENT

LLS	02-27-12	ADDED "AS ACQUIRED" INFO.
LLS	02-27-12	ADDED SHEET NUMBERS IN SUMMARY TABLE.
REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

FEDERAL PROJECT NO.

PID NO.

STATE JOB NO.

Summary of Additional Right of Way
Location #2 (GEA-700-4.46)

CUY-252-3.10/ VAR

7 / 15

27
35

85315

520135

NON-FEDERAL

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1 OWNERSHIP
4 PARCELS
0 TOTAL TAKES
0 OWNERSHIPS WITH STRUCTURES INVOLVED

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME
OF THE OHIO DEPARTMENT OF TRANSPORTATION
UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD		AUDITOR'S PARCEL	RECORD AREA (SQ.FT.)	TOTAL P.R.O. (SQ.FT.)	GROSS TAKE (SQ.FT.)	P.R.O. IN TAKE (SQ.FT.)	NET TAKE (SQ.FT.)	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS	AS ACQUIRED	
			BOOK	PAGE								LEFT	RIGHT			BOOK	PAGE
21	GEORGE & MILDRED KSENYAK	5, 14-15	637	264	26-090580	130,680								STATE	NO R/W REQUIRED.		
22	AARON A. & VILUNA JENNINGS	5, 14-15	944	167	26-204700	348,480		0		0				STATE			
22-S			988	253	26-214028	686,070		1600		1600				STATE	TO CONSTRUCT AND MAINTAIN A SEWER.	201100830408	
22-CH					26-214028			400		400				STATE	TO CONSTRUCT AND MAINTAIN A CHANNEL.		
22-T1					26-214028			1200		1200				STATE	TO CONSTRUCT A CULVERT AND PERFORM GRADING.		
22-T2					26-214028			1200		1200				STATE	TO CONSTRUCT A CULVERT AND PERFORM GRADING.		
	(TOTAL T1 + T2)							2400		2400							
23	JOE & MARY ANN KOSKY, CO-TRUSTEES	5, 14-15	1179	56	26-092700	166,835								STATE	NO R/W REQUIRED.		
24	MATTHEW W. MULDOON KATHERYN E. MULDOON	5, 14-15	849	1234	26-190800	137,214								STATE	NO R/W REQUIRED.		
25	NOT USED																
26	RUSSELL TOWNSHIP PARK COMMISSION		1262	668	26-707028	559,746								STATE	NO R/W REQUIRED.		
27	ROBERT K. OLSON JENNIFER G. OLSON		1779	2326	26-017000 26-017100	175,111								STATE	NO R/W REQUIRED.		
28-30	NOT USED																

* DENOTES R/W ENCROACHMENT

NOTE: ALL TEMPORARY PARCELS TO
BE OF 12 MONTH DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY
EASEMENTS TO BE USED FOR STORAGE OF
MATERIAL OR EQUIPMENT BY THE CONTRACTOR
UNLESS NOTED OTHERWISE.

LEGEND

S = SEWER EASEMENT
CH = CHANNEL EASEMENT
T = TEMPORARY EASEMENT

LLS	02-27-12	ADDED "AS ACQUIRED" INFO.
LLS	02-27-12	ADDED SHEET NUMBERS IN SUMMARY TABLE.
REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

FEDERAL PROJECT NO.

PID NO.

STATE JOB NO.

Summary of Additional Right of Way
Location #3 (GEA-87-1.34)

CUY-252-3.10/ VAR

8 / 15

28 / 35

85315

520135

NON-FEDERAL

R/W DESIGNER	LLS
R/W REVIEWER	TMS

CUY-252-3.10/ VAR

29
35

RESIDENTIAL

CAROLE JO HANZES MORONEY AND DAVID F. MORONEY
ROGER M. HANZES
6540 COLUMBIA RD
PPN: 262-07-017
200410070792

END ACQUISITION
STA. 39+12.38

N 7°54'03" W

N 7°54'03" W

JAMES E. BORLAND
6525 COLUMBIA RD
PPN:261-01-007
VOL. 1350 PG. 20
VOL. 1366 PG. 49

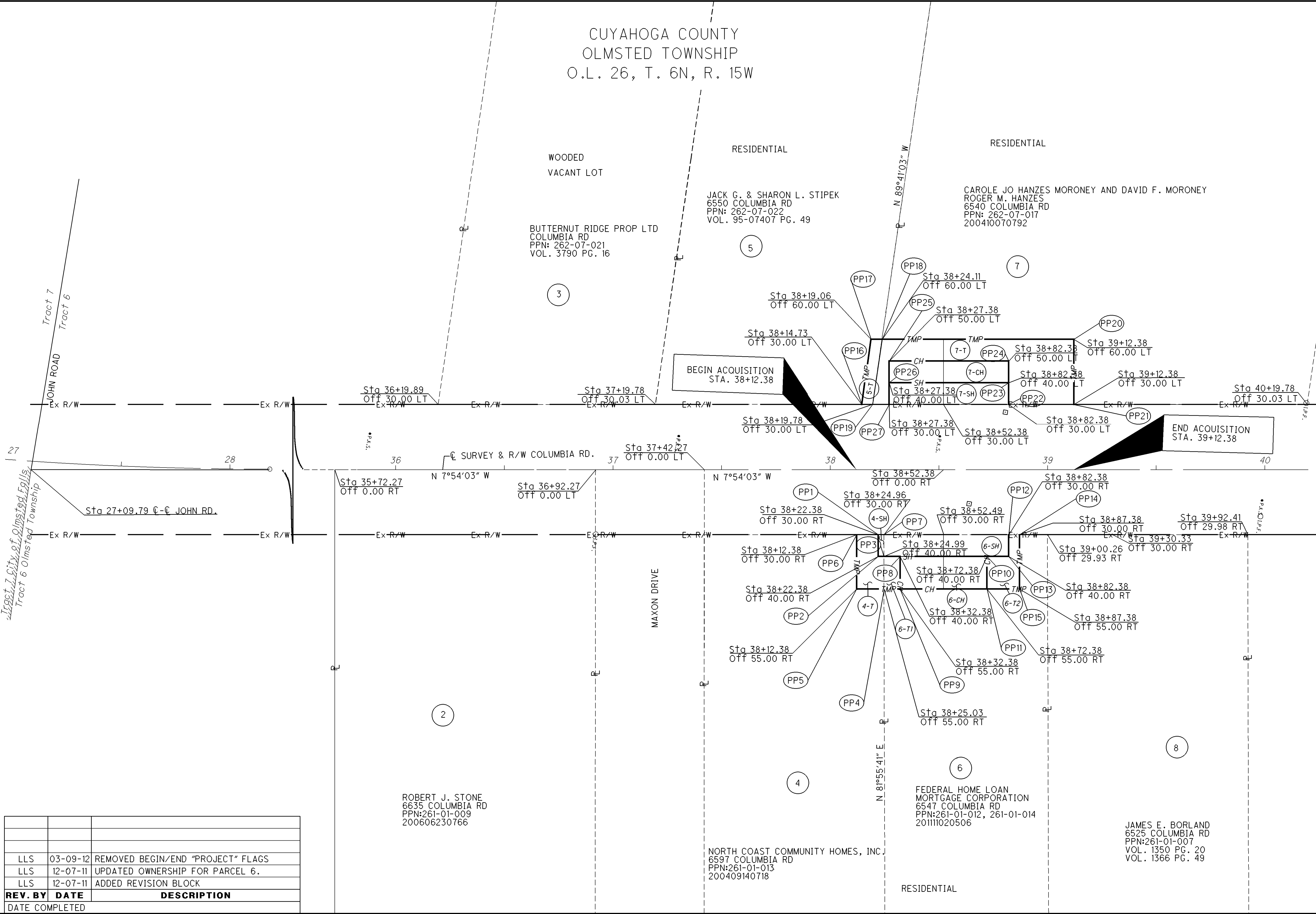
RESIDENTIAL

[illegible]

LLS	03-09-12	REVISED PROPOSED CULVERT
LLS	03-09-12	REVISED BEGIN/END "PROJECT" FLAGS
LLS	12-07-11	UPDATED OWNERSHIP FOR PARCEL 6.
REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

I:\PROJECTS\PID85315\row\sheet\CUY_252-3.10\85315row010.dgn 09-MAR-2012 9:38AM jgrmovse

REV. BY	DATE	DESCRIPTION
LLS	03-09-12	REMOVED BEGIN/END "PROJECT" FLAGS
LLS	12-07-11	UPDATED OWNERSHIP FOR PARCEL 6.
LLS	12-07-11	ADDED REVISION BLOCK
DATE COMPLETED		



RIGHT OF WAY BOUNDARY SHEET

CUY-252-3.10/ VAR

PID NO.

85315

R/W DESIGNER

LLS

R/W REVIEWER

TMS

10

15

30

35

0

10

20

40

HORIZONTAL SCALE IN FEET

CUYAHOGA COUNTY
OLMSTED TOWNSHIP
O.L. 26, T. 6N, R. 15W

4-SH	PARCEL 4-SH			
	FROM	TO	DIRECTION	DISTANCE
	PP7	PP3	N 81°55'41" E	10.00'
	PP3	PP2	S 7°54'03" E	2.61'
	PP2	PP1	S 82°05'57" W	10.00'
	PP1	PP7	N 7°54'03" W	2.58'

4-T	PARCEL 4-T			
	FROM	TO	DIRECTION	DISTANCE
	PP1	PP2	N 82°05'57" E	10.00'
	PP2	PP3	N 7°54'03" W	2.61'
	PP3	PP4	N 81°55'41" E	15.00'
	PP4	PP5	S 7°54'03" E	12.65'
	PP5	PP6	S 82°05'57" W	25.00'

5-T	PARCEL 5-T			
	FROM	TO	DIRECTION	DISTANCE
	PP16	PP17	N 89°41'03" W	30.31'
	PP17	PP18	N 7°54'03" W	5.05'
	PP18	PP19	S 89°41'03" E	30.31'
	PP19	PP16	S 7°54'03" E	5.05'

6-CH	PARCEL 6-CH			
	FROM	TO	DIRECTION	DISTANCE
	PP8	PP10	N 7°54'03" W	40.00'
	PP10	PP11	N 82°05'57" E	15.00'
	PP11	PP9	S 7°54'03" E	40.00'
	PP9	PP8	S 82°05'57" W	15.00'

6-T1	PARCEL 6-T1			
	FROM	TO	DIRECTION	DISTANCE
	PP8	PP9	N 82°05'57" E	15.00'
	PP9	PP4	S 7°54'03" E	7.35'
	PP4	PP3	S 81°55'41" W	15.00'
	PP3	PP8	N 7°54'03" W	7.39'

6-T2	PARCEL 6-T2			
	FROM	TO	DIRECTION	DISTANCE
	PP14	PP15	N 82°05'57" E	25.00'
	PP15	PP11	S 7°54'03" E	15.00'
	PP11	PP10	S 82°05'57" W	15.00'
	PP10	PP13	N 7°54'03" W	10.00'
	PP13	PP12	S 82°05'57" W	10.00'
	PP12	PP14	N 7°54'03" W	5.00'

6-SH	PARCEL 6-SH			
	FROM	TO	DIRECTION	DISTANCE
	PP12	PP13	N 82°05'57" E	10.00'
	PP13	PP3	S 7°54'03" E	57.39'
	PP3	PP7	S 81°55'41" W	10.00'
	PP7	PP12	N 7°54'03" W	57.42'

7-SH	PARCEL 7-SH			
	FROM	TO	DIRECTION	DISTANCE
	PP27	PP26	S 82°05'57" W	10.00'
	PP26	PP23	N 7°54'03" W	55.00'
	PP23	PP22	N 82°05'57" E	10.00'
	PP22	PP27	S 7°54'03" E	55.00'

7-CH	PARCEL 7-CH			
	FROM	TO	DIRECTION	DISTANCE
	PP26	PP25	S 82°05'57" W	10.00'
	PP25	PP24	N 7°54'03" W	55.00'
	PP24	PP23	N 82°05'57" E	10.00'
	PP23	PP26	S 7°54'03" E	55.00'

7-T	PARCEL 7-T			
	FROM	TO	DIRECTION	DISTANCE
	PP19	PP18	N 89°41'03" W	30.31'
	PP18	PP20	N 7°54'03" W	88.27'
	PP20	PP21	N 82°05'57" E	30.00'
	PP21	PP22	S 7°54'03" E	30.00'
	PP22	PP24	S 82°05'57" W	20.00'
	PP24	PP25	S 7°54'03" E	55.00'
	PP25	PP27	N 82°05'57" E	20.00'
	PP27	PP19	S 7°54'03" E	7.60'

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

RIGHT OF WAY BOUNDARY SHEET
CUY-252-3.10 LINE & POINT TABLE

CUY-252-3.10/ VAR

11 / 15

31
35

R/W DESIGNER
LLS

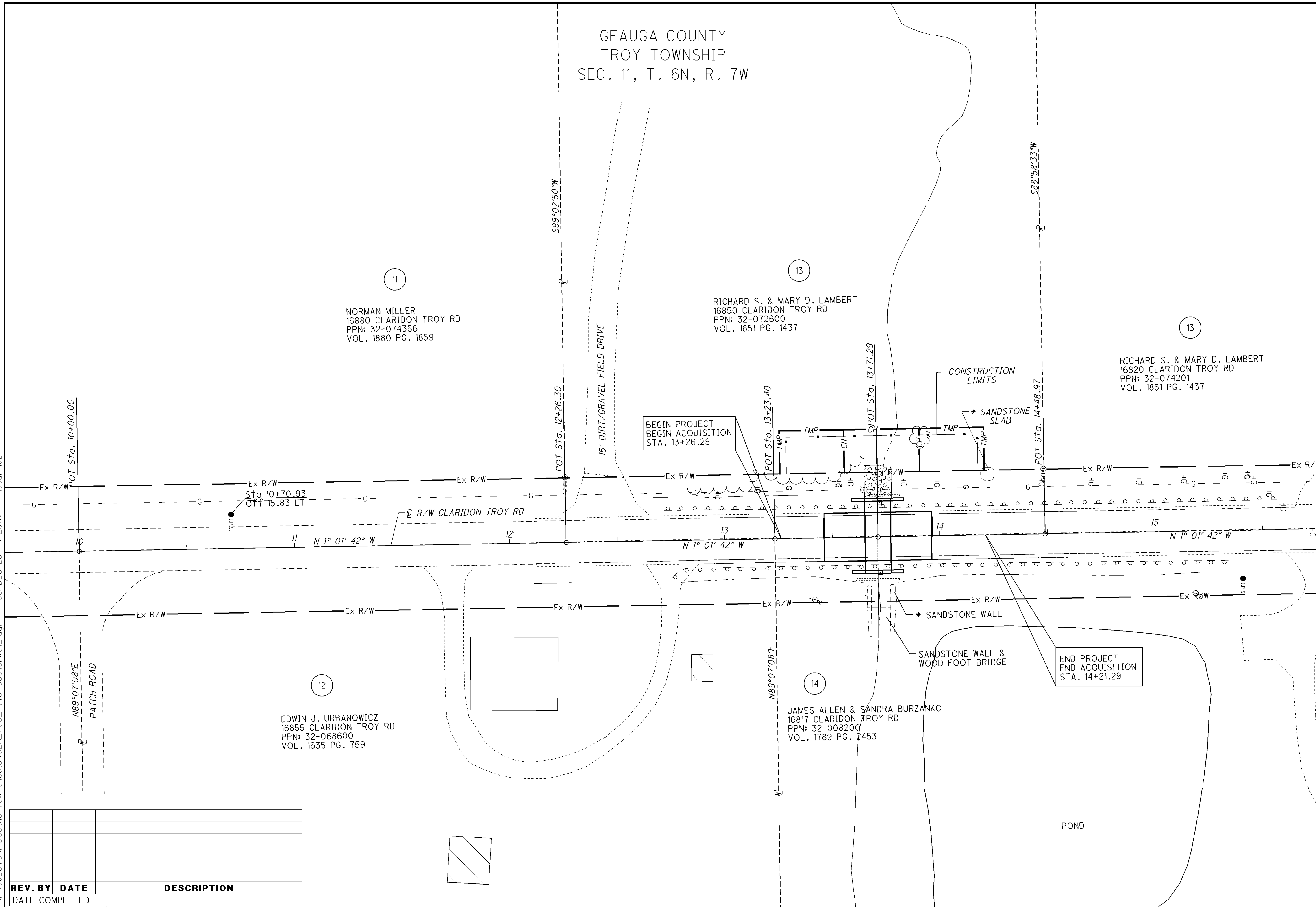
R/W REVIEWER
TMS

PID NO.
85315

0 10 20 40
HORIZONTAL
SCALE IN FEET

END PROJECT
END ACQUISITION
STA. 14+21.29

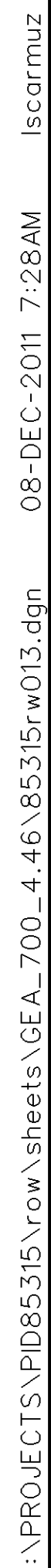
REV. BY	DATE	DESCRIPTION
DATE COMPLETED		



R/W DESIGNER	LLS
R/W REVIEWER	TMS

CUY-252-3.10/ VAR

33
35



REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

	BEARING	DISTANCE
A	S88°58'18"W	20.00'
B	N1°01'42"W	30.00'
C	N88°58'18"E	20.00'
D	N1°01'42"W	35.00'
E	S88°58'18"W	20.00'
F	N1°01'42"W	30.00'
G	N88°58'18"E	20.00'

JAMES ALLEN & SANDRA BURZANKO
16817 CLARIDON TROY RD
PPN: 32-008200
VOL. 1789 PG. 2453

I:\PROJECTS\PID85315\row\sheet\GEA-87-1.34-85315rw014.dgn 09-MAR-2012 9:41AM jgrmovse

GEAUGA COUNTY
RUSSELL TOWNSHIP
LOTS 6 & 7, TRACT 2, T. 7N, R. 9W

CARIN A. ZIMPERMAN
77400 KINSMAN RD.
PPN: 26-000800
VOL. 1395 PG. 1181

MATTHEW W. MULDOON
KATHERYN E. MULDOON
7728 KINSMAN RD.
PPN: 26-190800
VOL. 849 PG. 1234

JOE & MARY ANN KOSKY, CO-TRUSTEES
7708 KINSMAN RD.
PPN: 26-092700
VOL. 1179 PG. 56

GEORGE & MILDRED KSENYAK
7690 KINSMAN RD.
PPN: 26-090580
VOL. 637 PG. 264

AARON A. & VILUNA JENNINGS
7691 KINSMAN RD.
PPN: 26-214028
VOL. 988 PG. 253

AARON A. & VILUNA JENNINGS
7691 KINSMAN RD.
PPN: 26-204700
VOL. 944 PG. 167

WOODED
VACANT LOT



PID NO.
85315

R/W DESIGNER
LLS
R/W REVIEWER
TMS

RIGHT OF WAY TOPO SHEET
GEA-87-1.34 CULVERT

CUY-252-3.10/ VAR

14 / 15

34
35

REV. BY	DATE	DESCRIPTION
LLS	03-09-12	CHANGED "WORK" FLAG TO "PROJECT" FLAG
LLS	03-09-12	ADDED PROPOSED TREES
LLS	07-20-11	ADDED STATION LIMIT FLAGS.
LLS	07-20-11	REVISED PIPE, HEADWALL & GABION WALLS
DATE COMPLETED		

GEAUGA COUNTY
RUSSELL TOWNSHIP
LOTS 6 & 7, TRACT 2, T. 7N, R. 9W

CARIN A. ZIMPERMAN
77400 KINSMAN RD.
PPN: 26-000800
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VOL. 1179 PG. 56

GEORGE & MILDRED KSENYAK
7690 KINSMAN RD.
PPN: 26-090580
VOL. 637 PG. 264

21 Sta 69+00.00
Off 41.00 LT

Sta 70+84.00
Off 0.00 RT

Sta 71+04.00
Off 30.00 R7

Sta 71+34.00
Off 30.00 RT

Sta 71+34.00
Off 70.00 R7

5.00
Off 10.00
10.00
10.00 RT

0' 05' 06" E

50.00 RT

50.0

22-71

30.00' IMP
567°54'54"W

Sta 70+64.00
+ 70.00 RT

Sta 10
Off 70.00
10.00'-
25'06"W

N22°05'06"W
Sta 70+6
80

Sta 70
Off 80

AARON A. & VILUNA JENNINGS
7691 KINSMAN RD.
PPN: 26-214028
VOL. 988 PG. 253

AARON A. & VILUNA JENNINGS
7691 KINSMAN RD.
PPN: 26-204700
VOL. 944 PG. 167

PID NO. **85315**

R/W DESIGNER	LLS	R/W REVIEWER	TNC
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RIGHT OF WAY BOUNDARY SHEET
GEA-87-1 34 CIII VERT

CUY-252-3.10/ VAR

[illegible][illegible]

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

PROJECT DESCRIPTION:
THE PROPOSED PROJECT WILL INCLUDE REPLACEMENT OF THE EXISTING CULVERT ON KINSMAN ROAD (GEA-87), IN RUSSELL TOWNSHIP, GEauga COUNTY, OHIO.

HISTORIC RECORDS:
NO HISTORICAL BORINGS RECORDS WERE FOUND FOR THIS PROJECT.

GEOLOGY
GEAUGA COUNTY IS PART OF THE APPALACHIAN PLATEAU OF OHIO, WHICH INCLUDES THE GLACIATED PART OF NORTHEASTERN OHIO. THIS COUNTY WAS ONCE COVERED BY SEVERAL GLACIERS. THE GLACIAL DRIFT RANGES FROM A FEW FEET TO LESS THAN 100 FEET IN THICKNESS. THIS MANTAL OF GLACIAL DRIFT OVERLIES SANDSTONE AND SHALE BEDROCK. THE SOILS IN THE VICINITY OF THE SITE ARE LOCATED IN THE WADSWORTH-RITTMAN ASSOCIATION. THE WADSWORTH-RITTMAN ASSOCIATION IS DEEP, NEARLY LEVEL TO VERY STEEP, POORLY DRAINED TO MODERATELY WELL DRAINED SOILS THAT FORMED IN MEDIUM TEXTURED GLACIAL TILL.

RECONNAISSANCE
FIELD RECONNAISSANCE WAS PERFORMED ON MAY 17, 2011. THE FILED DRILLING OPERATIONS HAS BEEN PERFORMED ON MAY 20, 2011. THE EXISTING PAVEMENT ALONG KINSMAN ROAD (GEA-87) OBSERVED TO BE IN FAIR CONDITION. THE SURROUNDING AREA IS WOODED RURAL LAND WITH SOME RESIDENTIAL LOTS INCLUDING HOUSES.

SURFACE EXPLORATION
THE SCOPE OF THE EXPLORATION AND ANALYSIS INCLUDED A RECONNAISSANCE OF THE PROJECT SITE, DRILLING 1 TEST BORING TO A DEPTH OF ABOUT 31.1 FEET BELOW THE EXISTING PAVEMENT GRADES, A LABORATORY TESTING PROGRAM, AND AN ENGINEERING ANALYSIS AND EVALUATION OF THE SUBSURFACE MATERIALS. THE NUMBER AND LOCATION OF THE TEST BORINGS WERE SELECTED BY THE REPRESENTATIVES OF ODOT D-12 AND FIELD LOCATED BY THE REPRESENTATIVES OF PSI PRIOR TO THE FIELD DRILLING OPERATIONS.

THE BORINGS WERE DRILLED WITH A TRUCK MOUNTED ROTARY DRILL RIG, USING 3.25-INCH I.D. HOLLOW STEM AUGERS TO ADVANCE THE HOLES THROUGH SOIL. DISTURBED SOIL SAMPLES WERE OBTAINED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206). THE HAMMER SYSTEM USED WAS LAST CALIBRATED ON SEPTEMBER 25, 2009, AND THE AVERAGE DRILL ROD ENERGY RATIO (ER) IS 78% (D-50 TRUCK MOUNTED).

EXPLORATION FINDINGS
THE SURFACE OF THE SITE, AT THE TEST BORING LOCATIONS B-001-0-11 WAS COVERED WITH A LAYER OF ASPHALT CONCRETE ABOUT 13 INCHES IN THICKNESS. THE ASPHALT CONCRETE AT THE TEST BORING LOCATION B-001-0-11 WAS UNDERLAIN BY BLACK SAND AND GRAVEL WITH ASPHALT FRAGMENTS (BASE MATERIALS) OF ABOUT 8 INCHES IN THICKNESS. THE THICKNESS OF THE CONCRETE AND BASE MATERIALS SHOULD BE EXPECTED TO VARY THROUGHOUT THE CONSTRUCTION AREA.

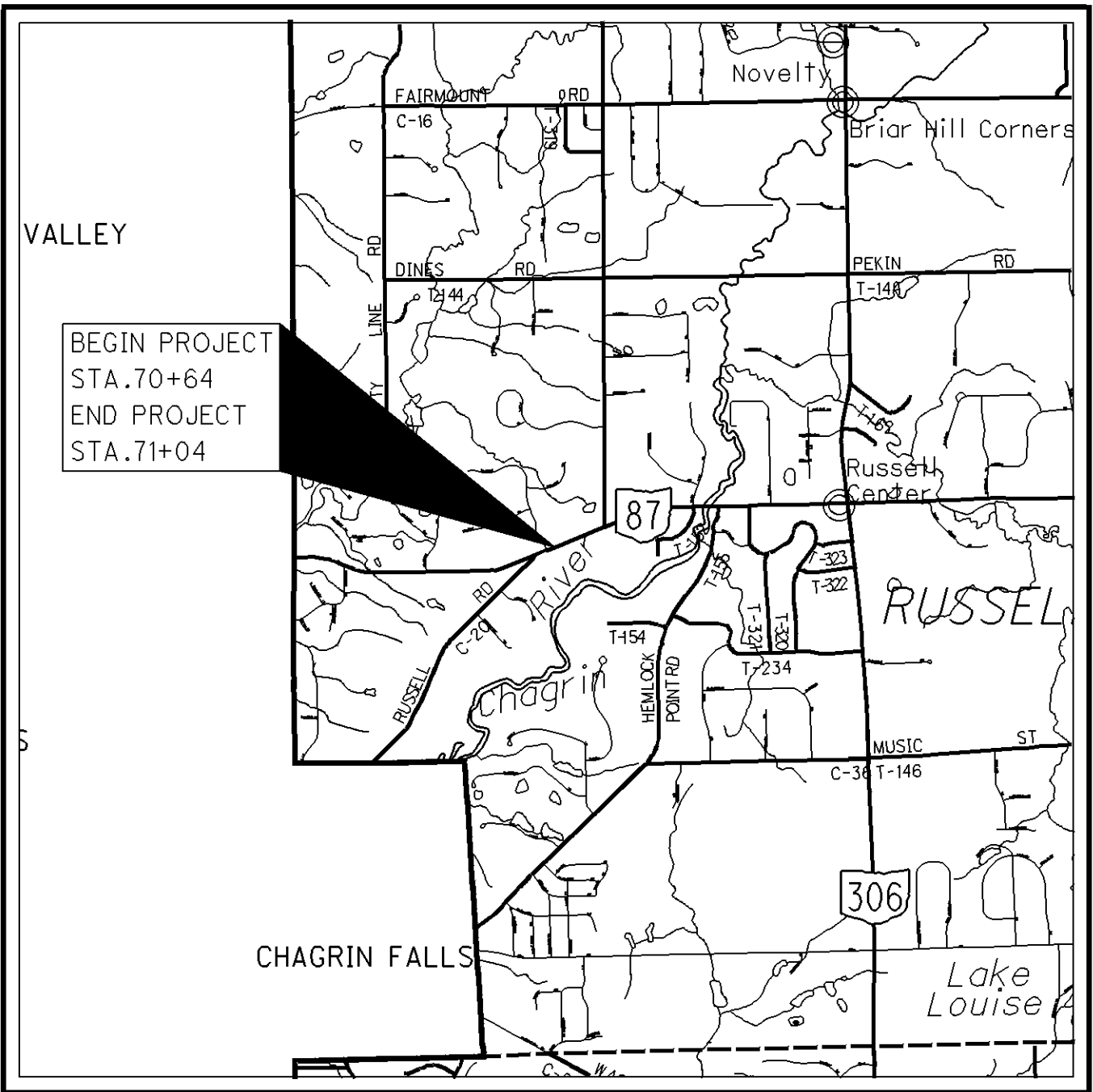
THE BASE MATERIALS WERE UNDERLAIN BY MISCELLANEOUS FILL SOILS TO A DEPTH OF ABOUT 5 FEET BELOW THE EXISTING PAVEMENT GRADES. THE FILL MATERIALS CONSISTED OF GRAVEL AND ROCK FRAGMENTS (A-1-B), FINE TO COARSE SAND (A-3A) CONTAINING VARYING DEGREES OF ROCK FRAGMENTS, SILT, CLAY, AND ORGANICS. THE FILL SOILS EXHIBITED A MOISTURE CONTENT RANGING FROM ABOUT 12 TO 19 PERCENT. THE DEPTH AND ENGINEERING CHARACTERISTICS OF THE FILL MATERIALS, SUCH AS STRENGTH, COMPOSITION AND COMPRESSIBILITY, WILL LIKELY BE VARIABLE.

UNDERLYING THE FILL MATERIALS, NATURAL SOILS WERE ENCOUNTERED AND EXTENDED TO A DEPTH OF ABOUT 26.5 FEET BELOW THE EXISTING PAVEMENT GRADES. THE NATURAL SOILS CONSISTED OF SILT (A-4B), SILT AND CLAY (A-6A), AND SILTY CLAY (A-6A), WITH VARYING DEGREES OF SAND AND ROCK FRAGMENTS. THE NATURAL SOILS EXHIBITED A MOISTURE CONTENT RANGING FROM ABOUT 17 TO 27 PERCENT. THE NATURAL SOILS EXHIBITED A STIFF TO VERY HARD CONSISTENCY, BASED ON THE STANDARD PENETRATION TESTS. THE AREA'S BOTTOMMOST FORMATION CONSISTED OF MODERATELY STRONG TO STRONG SANDY SHALE BEDROCK FORMATION AND ENCOUNTERED TO A DEPTH OF ABOUT 26.5 FEET BELOW THE EXISTING PAVEMENT GRADES.

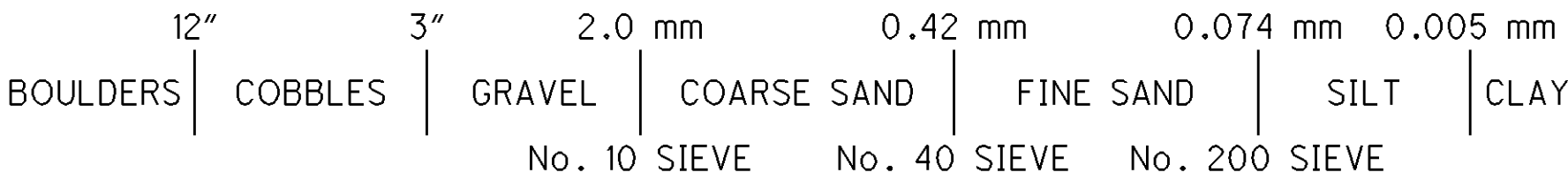
SPECIFICATIONS
THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JANUARY 2011.

AVAILABLE INFORMATION
ALL AVAILABLE SOIL INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1600 WEST BROAD STREET OR THE OFFICE OF STRUCTURAL ENGINEERING AT 1980 WEST BROAD STREET.

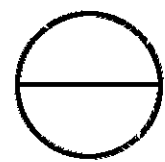
LEGEND		ODOT CLASS	CLASSIFIED MECH./VISUAL	
DESCRIPTION				
	GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-b	0	1
	COARSE AND FINE SAND	A-3a	0	1
	SILT	A-4b	1	1
	SILT AND CLAY	A-6a	2	4
	SILTY CLAY	A-6b	1	0
		TOTAL	4	7
	SHALE	VISUAL		
	PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	VISUAL		
	SOD AND TOPSOIL = X = APPROXIMATE THICKNESS	VISUAL		
	BORING LOCATION - PLAN VIEW.			
	DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.			
WC	INDICATES WATER CONTENT IN PERCENT.			
N ₆₀	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.			
X/Y/Z	NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X= NUMBER OF BLOWS FOR FIRST 6 INCHES. Y= NUMBER OF BLOWS FOR SECOND 6 INCHES. Z= NUMBER OF BLOWS FOR THIRD 6 INCHES.			
W—	INDICATES FREE WATER ELEVATION.			
●	INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.			
⊖	INDICATES A NON-PLASTIC MATERIAL WITH A MOISTURE CONTENT GREATER THAN 25 % OR GREATER THAN 19 % WITH A WET APPEARANCE.			
*	INDICATES A SAMPLE TAKEN WITHIN 3 FT OF PROPOSED GRADE.			
SS	INDICATES A SPLIT SPOON SAMPLE.			
NP	INDICATES A NON-PLASTIC SAMPLE.			

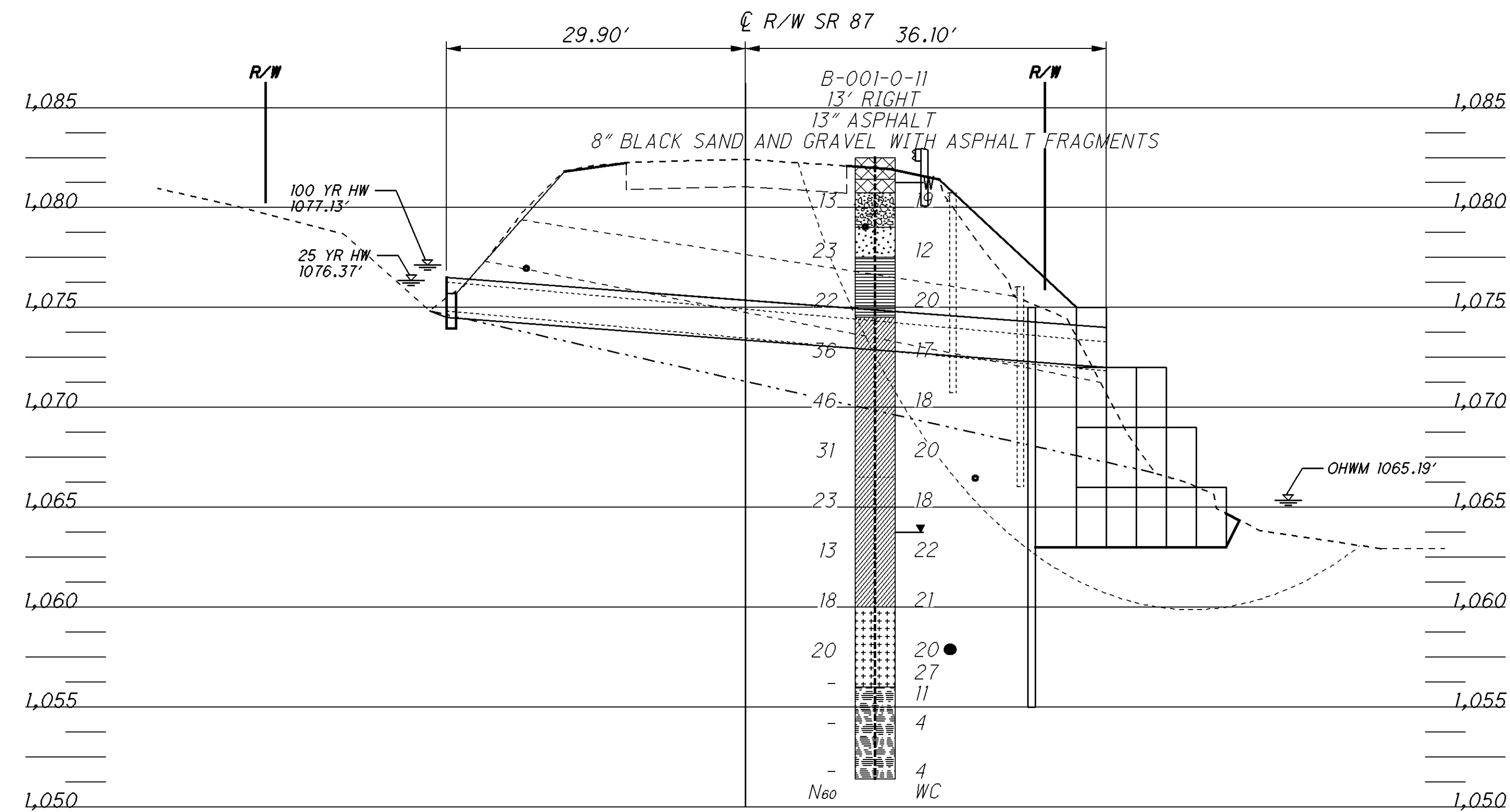


PARTICLE SIZE DEFINITIONS



RECON. -
DRILLING - DR 5/20/11
DRAWN - HRJ 2/5/12 - 2/10/12
REVIEWED -





PROJECT: 0142-453B (GEA-87)				DRILLING FIRM / OPERATOR: PSI / D. RAMSEY				DRILL RIG: D-50				STATION / OFFSET: 71+30, 13 RT								EXPLORATION ID: B-001-0-11				
TYPE: CULVERT REPLACEMENT				SAMPLING FIRM / LOGGER: PSI / S.T.				HAMMER: DIEDRICH AUTOMATIC				ALIGNMENT: WB-SHOULDER												
PID: 85315 BR ID: 5/20/11				DRILLING METHOD: 3.25" HSA				CALIBRATION DATE: 9/25/09				ELEVATION: 1082.5 (MSL) EOB: 31.1 ft.								PAGE				
START: 5/20/11 END: 5/20/11				SAMPLING METHOD: SPT				ENERGY RATIO (%): 78				LAT / LONG: 41° 27' 36.5", -81° 21' 57.8"								1 OF 1				
MATERIAL DESCRIPTION AND NOTES				ELEV.	DEPTHS	SPT/ RQD	N60	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)								WC	000T CLASS (g)	BACK FILL			
											GR	CS	FS	SI	CL	LL	PL	PI						
13" ASPHALT				1082.5																				
8" Black SAND and Gravel with Asphalt Fragments				1081.4	W	7	6	13	56	SS-1	-													
Black, Wet, GRAVEL and Rock Fragments, Little Asphalt Fragments, Little Cnders, Little Organics, Little Silt, Trace Clay (Fill)				1080.7	2.5	4																		
Medium Dense, Brown, Moist, Fine to Medium SAND, Little Silt, Little Rock Fragments, Trace Clay, Little Organics (Fill)				1079.0																				
Very Stiff, Gray, Wet, Silty CLAY, Trace Sand				1077.5	5.0	10																		
					7.5	5	7	22	94	SS-3	-	3	3	8	35	51	38	22	16	20	A-6b (10)			
				1074.5		10																		
Very Stiff to Hard, Brown, Moist, SILT and CLAY, Little Sand, Trace Gravel						9	12	36	100	SS-4	-													
					10.0	16																		
						12	16	46	100	SS-5	-	2	4	9	37	48	32	21	11	18	A-6a (8)			
					12.5	19																		
						8	11	31	100	SS-6	-													
					15.0	13																		
**Gray @ 17.5 feet						7	8	23	100	SS-7	-													
					17.5	10																		
						3	4	13	100	SS-8	-													
					20.0	6																		
						4	6	18	100	SS-9	-	0	0	1	45	54	33	22	11	21	A-6a (8)			
Stiff to Very Hard, Gray, Wet, SILT, Little to Some Clay, Little Sand, Trace to Some Rock Fragments				1060.0	22.5	8																		
						5	7	20	72	SS-10	-	2	2	5	57	34	23	20	3	20	A-4b (8)			
					25.0	8																		
Moderately Strong to Strong, Gray, Dry, Sandy SHALE				1056.0		6	50/4"	-	100	SS-11	-	-	-	-	-	-	-	-	-	27	A-4b (V) Rock (V)			
					27.5																			
						50/2"			50	SS-12	-	-	-	-	-	-	-	-	-	4	Rock (V)			
					30.0																			
				1051.4	30.7"	10				SS-13	-	-	-	-	-	-	-	-	-	4	Rock (V)			

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - 1/20/12 15:34 - 1:\ODOT LOGS\0142-453B.GPJ

NOTES: NONE
ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

PROJECT DESCRIPTION:
THE PROPOSED PROJECT WILL INCLUDE REPLACEMENT OF THE EXISTING CULVERT AT CLARIDON TROY ROAD (GEA-700-4.46), IN TROY TOWNSHIP, GEauga COUNTY, OHIO.

HISTORIC RECORDS:
NO HISTORICAL BORINGS RECORDS WERE FOUND FOR THIS PROJECT.

GEOLOGY
GEAUGA COUNTY IS PART OF THE APPALACHIAN PLATEAU OF OHIO, WHICH INCLUDES THE GLACIATED PART OF NORTHEASTERN OHIO. THIS COUNTY WAS ONCE COVERED BY SEVERAL GLACIERS. THE GLACIAL DRIFT RANGES FROM A FEW FEET TO LESS THAN 100 FEET IN THICKNESS. THIS MANTAL OF GLACIAL DRIFT OVERLIES SANDSTONE AND SHALE BEDROCK. THE SOILS IN THE VICINITY OF THE SITE ARE LOCATED IN THE WADSWORTH-RITTMAN ASSOCIATION. THE WADSWORTH-RITTMAN ASSOCIATION IS DEEP, NEARLY LEVEL TO VERY STEEP, POORLY DRAINED TO MODERATELY WELL DRAINED SOILS THAT FORMED IN MEDIUM TEXTURED GLACIAL TILL.

RECONNAISSANCE
FIELD RECONNAISSANCE WAS PERFORMED ON MAY 17, 2011. THE FILED DRILLING OPERATIONS HAS BEEN PERFORMED ON MAY 20, 2011. THE EXISTING PAVEMENT ALONG CLARIDON TROY ROAD (GEA-700-4.46) OBSERVED TO BE IN FAIR CONDITION. THE SURROUNDING AREA IS WOODED RURAL LAND WITH SOME RESIDENTIAL LOTS INCLUDING HOUSES.

SURFACE EXPLORATION
THE SCOPE OF THE EXPLORATION AND ANALYSIS INCLUDED A RECONNAISSANCE OF THE PROJECT SITE, DRILLING 2 TEST BORINGS TO A DEPTH OF APPROXIMATELY 19.3 TO 19.6 FEET BELOW THE EXISTING PAVEMENT GRADES, A LABORATORY TESTING PROGRAM, AND AN ENGINEERING ANALYSIS AND EVALUATION OF THE SUBSURFACE MATERIALS. THE NUMBER AND LOCATION OF THE TEST BORINGS WERE SELECTED BY THE REPRESENTATIVES OF ODOT D-12 AND FIELD LOCATED BY THE REPRESENTATIVES OF PSI PRIOR TO THE FIELD DRILLING OPERATIONS.

THE BORINGS WERE DRILLED WITH A TRUCK MOUNTED ROTARY DRILL RIG, USING 3.25-INCH I.D. HOLLOW STEM AUGERS TO ADVANCE THE HOLES THROUGH SOIL. DISTURBED SOIL SAMPLES WERE OBTAINED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206). THE HAMMER SYSTEM USED WAS LAST CALIBRATED ON SEPTEMBER 25, 2009, AND THE AVERAGE DRILL ROD ENERGY RATIO (ER) IS 78% (D-50 TRUCK MOUNTED).

EXPLORATION FINDINGS
THE SURFACE OF THE SITE, AT THE TEST BORING LOCATIONS B-001-0-11 AND B-002-0-11, WAS COVERED WITH A LAYER OF ASPHALT CONCRETE RANGING FROM APPROXIMATELY 10.5 TO 16.5 INCHES IN THICKNESS. THE ASPHALT CONCRETE AT THE TEST BORING LOCATIONS B-001-0-11 AND B-002-0-11 WAS UNDERLAIN BY LARGE GRAVEL BASE MATERIALS OF ABOUT 3 TO 4 INCHES IN THICKNESS. THE BASE MATERIALS AT TEST BORING LOCATION B-001-0-11 WAS UNDERLAIN BY BROKEN ASPHALT LAYER OF ABOUT 4 INCHES IN THICKNESS. THE THICKNESS OF THE ASPHALT CONCRETE AND BASE MATERIALS SHOULD BE EXPECTED TO VARY THROUGHOUT THE CONSTRUCTION AREA.

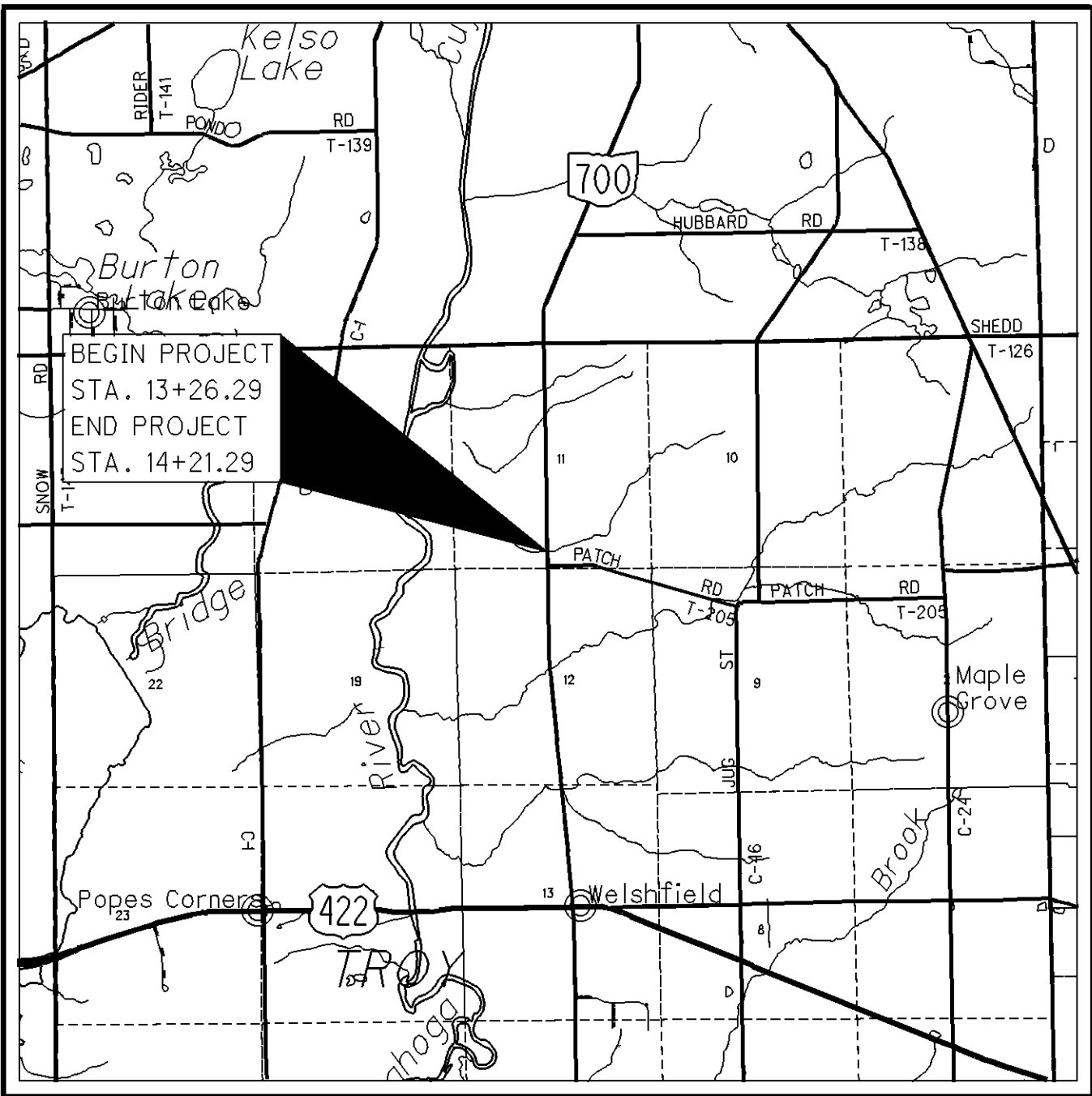
THE BASE MATERIALS WERE UNDERLAIN BY MISCELLANEOUS FILL SOILS TO THE DEPTHS OF ABOUT 4 TO 5.5 FEET BELOW THE EXISTING PAVEMENT GRADES. THE FILL MATERIALS CONSISTED OF FINE TO COARSE SAND (A-3A), FINE SAND (A-3) AND SANDY SILT (A-4A), CONTAINING VARYING DEGREES OF ROCK FRAGMENTS, CINDERS AND ORGANICS. THE FILL SOILS EXHIBITED A MOISTURE CONTENT RANGING FROM ABOUT 15 TO 20 PERCENT. THE DEPTH AND ENGINEERING CHARACTERISTICS OF THE FILL MATERIALS, SUCH AS STRENGTH, COMPOSITION AND COMPRESSIBILITY, WILL LIKELY BE VARIABLE.

UNDERLYING THE FILL MATERIALS, NATURAL SOILS WERE ENCOUNTERED AND EXTENDED TO THE DEPTHS ABOUT 13 TO 14.5 FEET BELOW THE EXISTING PAVEMENT GRADES. THE NATURAL SOILS CONSISTED OF FINE TO COARSE SAND (A-3A) AND CLAY (A-7-6) WITH VARYING DEGREES OF SILT AND ROCK FRAGMENTS. THE NATURAL SOILS EXHIBITED A MOISTURE CONTENT RANGING FROM ABOUT 16 TO 32 PERCENT. THE GRANULAR NATURAL SOILS EXHIBITED A LOOSE TO DENSE RELATIVE DENSITY AND THE COHESIVE SOILS EXHIBITED A STIFF CONSISTENCY, BASED ON THE STANDARD PENETRATION TESTS. THE AREA'S BOTTOMMOST FORMATION CONSISTED OF VERY WEAK TO STRONG, BROWN, WEATHERED SANDSTONE FORMATION AND ENCOUNTERED AT THE TEST BORING LOCATIONS B-001-0-11 AND B-002-0-11 AT ABOUT 13 TO 15 FEET BELOW THE EXISTING PAVEMENT GRADES.

SPECIFICATIONS
THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JANUARY 2011.

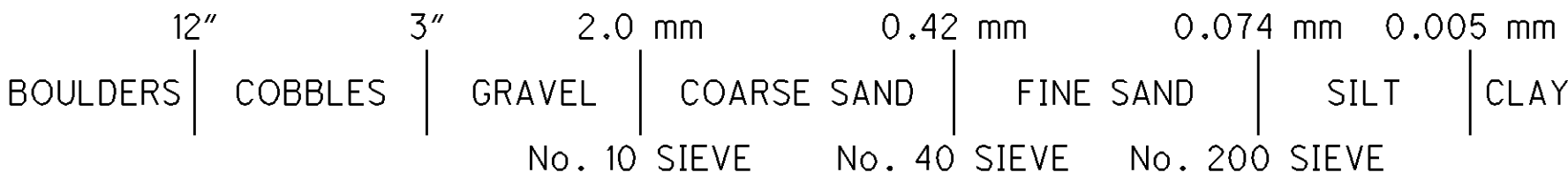
AVAILABLE INFORMATION
ALL AVAILABLE SOIL INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1600 WEST BROAD STREET OR THE OFFICE OF STRUCTURAL ENGINEERING AT 1980 WEST BROAD STREET.

LEGEND			
	DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL
	FINE SAND	A-3	0 1
	COARSE AND FINE SAND	A-3a	1 6
	SANDY SILT	A-4a	0 2
	CLAY	A-7-6	2 3
		TOTAL	3 12
	WEATHERED SANDSTONE	VISUAL	
	PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	VISUAL	
	SOD AND TOPSOIL = X = APPROXIMATE THICKNESS	VISUAL	
	BORING LOCATION - PLAN VIEW.		
	DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.		
WC	INDICATES WATER CONTENT IN PERCENT.		
N ₆₀	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.		
X/Y/Z	NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X= NUMBER OF BLOWS FOR FIRST 6 INCHES. Y= NUMBER OF BLOWS FOR SECOND 6 INCHES. Z= NUMBER OF BLOWS FOR THIRD 6 INCHES.		
W—	INDICATES FREE WATER ELEVATION.		
●	INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.		
⊕	INDICATES A NON-PLASTIC MATERIAL WITH A MOISTURE CONTENT GREATER THAN 25 % OR GREATER THAN 19 % WITH A WET APPEARANCE.		
*	INDICATES A SAMPLE TAKEN WITHIN 3 FT OF PROPOSED GRADE.		
SS	INDICATES A SPLIT SPOON SAMPLE.		
NP	INDICATES A NON-PLASTIC SAMPLE.		

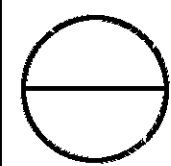


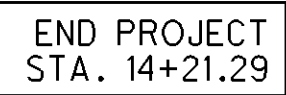
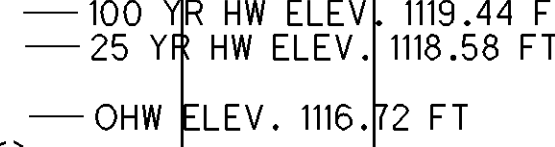
LOCATION MAP
SCALE IN MILES

PARTICLE SIZE DEFINITIONS



RECON. -
DRILLING - DR 5/20/11
DRAWN - HRJ 2/5/12 - 2/10/12
REVIEWED -





PROJECT: 0142-453A (GEA-700-4.46)			DRILLING FIRM / OPERATOR: PSI / D. RAMSEY			DRILL RIG: D-50			STATION / OFFSET: 13+40, 8 RT					EXPLORATION ID: B-001-0-11																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
TYPE: CULVERT REPLACEMENT			SAMPLING FIRM / LOGGER: PSI / S.T.			HAMMER: DIEDRICH AUTOMATIC			ALIGNMENT: NB-RWT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
PID: 85315 BR ID: 5/20/11			DRILLING METHOD: 3.25" HSA			CALIBRATION DATE: 9/25/09			ELEVATION: 1119.5 (MSL) EOB: 19.3 ft.					PAGE: 1 OF 1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
START: 5/20/11 END: 5/20/11			SPT			ENERGY RATIO (%): 78			LAT / LONG: 41° 24' 41.7", -81° 08' 41.9"																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
MATERIAL DESCRIPTION AND NOTES			ELEV.			SPT/ RQD			REC (%)			SAMPLE ID			HP (tsf)			GR			GRADATION (%)			ATTERBERG			WC			ODOT CLASS (G)			BACK FILL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
10.5" ASPHALT 3" GRAVEL 4.0" ASPHALT Brown, Wet, Fine to Coarse SAND, Little Silt, Little Cinders, Little Organics, Little Rock Fragments, Trace Clay (Fill) Brown, Wet, Fine to Medium SAND, Little Silt, Little Cinders, Little Organics, Little Rock Fragments, Trace Clay (Fill) Stiff, Brown, Moist, CLAY, Some Silt, Little Sand, Trace Gravel ** Gray @ 7.5 feet Very Weak to Slightly Strong, Brown, Weathered SANDSTONE			1119.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 2/2/12 09:44 - L:\ODOT LOGS\0142-453A.PJ

PROJECT: 0142-453A (GEA-700-4.46)				DRILLING FIRM / OPERATOR: PSI / D. RAMSEY				DRILL RIG: D-50				STATION / OFFSET: 13+95, 8 LT				EXPLORATION ID B-002-0-11																					
TYPE: CULVERT REPLACEMENT				SAMPLING FIRM / LOGGER: PSI / S.T.				HAMMER: DIEDRICH AUTOMATIC				ALIGNMENT: SB-RWT				PAGE																					
PID: 85315 BR ID:				3.25" HSA				CALIBRATION DATE: 9/25/09				ELEVATION: 1119.5 (MSL) EOB: 19.6 ft.				1 OF 1																					
START: 5/20/11 END: 5/20/11				SPT				ENERGY RATIO (%): 78				LAT / LONG: 41° 24' 41.9", -81° 08' 42.0"																									
MATERIAL DESCRIPTION AND NOTES								ELEV.		DEPTHS		SPT/ RQD		N60		REC (%)		SAMPLE ID		HP (tsf)		GR		GRADATION (%)		ATTERBERG		WC		ODOT CLASS (G)		BACK FILL					
16.5" ASPHALT								1119.5																													
								1118.1		1																											
4" Very Large GRAVEL								1117.7		2		9		4		18		67		SS-1		-		-		-		-		15		A-4a (V)					
										3																											
Brown, Wet, Sandy SILT, Little Organics, Little to Some Gravel, Little Cinders, Little to Trace Clay (Fill)								1115.6		4		3		6		78		SS-2		-		-		-		-		20		A-4a (V)							
										5																											
Loose, Brown, Wet, Fine to Medium SAND, Little Silt, Trace, Little Clay, Trace Gravel								1114.0		6																											
										7																											
Stiff, Brown, Wet, CLAY, Some Silt, Little Sand, Trace Gravel										8																											
										9																											
Dense, Brown, Wet, Fine to Medium SAND, Little Silt, Trace Clay, Some Rock Fragments								1105.5		10		6		17		100		SS-4		-		0		0		9		91		52		29		32		A-7-6 (16)	
								1105.0		11																											
Strong, Brown, Medium Grain, Weathered SANDSTONE										12																											
										13																											
										14		6		9		38		100		SS-5		-		-		-		-		-		27		A-7-6 (V)			
										15																											
										16																											
										17																											
										18																											
										19																											
								1099.9		20		30		1"		-		100		SS-6		-		-		-		-		-		11		Rock (V)			
										21																											
										22		30		1"		-		100		SS-7		-		-		-		-		-		8		Rock (V)			
										23																											
NOTES: GPS READING ARE TAKEN AT RIGHT MOST SHOULDER																																					
ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED																																					

STANDARD ODOT SOIL BORING LOG (8.5 X 11) - OH DOT.GDT - 2/2/12 09:45 - L:\ODOT LOGS\0142-453A.PJ

I:\PROJECTS\PID85315\geotechnical\sheets\85315IC003.dgn 06-MAR-2012 3:09PM jgrmovse

PROJECT DESCRIPTION

THE PROPOSED PROJECT WILL INCLUDE CONSTRUCTION OF A NEW CULVERT (CUY-252-03.10) INCLUDING HEADWALLS ON COLUMBIA ROAD.

HISTORICAL RECORDS

NO HISTORICAL BORINGS RECORDS WERE FOUND FOR THIS PROJECT.

SITE GEOLOGY

BASED UPON A PUBLISHED OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) MAP REFERENCE, THE PROJECT SITE LIES WITHIN THE GLACIATED PORTION OF NORTHEAST OHIO (WHITE, 1982, BULLETIN 68). THE SOILS IN THE VALLEY AREA AT THE TOE OF THE SLOPE ARE MAPPED AS ALLUVIUM, WHEREAS THE SOILS AT THE CREST OF THE SLOPE ARE MAPPED AS GLACIAL LACUSTRINE SOILS UNDERLAIN BY GLACIAL TILL. BASED UPON A PUBLISHED ODNR GEOLOGIC MAP, THE UPPER BEDROCK FORMATIONS CONSIST OF MISSISSIPPIAN AGED WAVERLY AND MAXVILLE SHALE AT THE CREST OF THE SLOPE, TRANSITIONING TO OLDER DEVONIAN AGED OLENTANGY AND OHIO SHALE AT LOWER ELEVATIONS TOWARDS THE VALLEY.

RECONNAISSANCE

FIELD RECONNAISSANCE WAS PERFORMED ON FEBRUARY 23, 2012. THE FILED DRILLING OPERATIONS HAS BEEN PERFORMED ON FEBRUARY 27, 2012. THE EXISTING PAVEMENT ALONG COLUMBIA ROAD (CUY-252-03.10) OBSERVED TO BE IN FAIR CONDITION. THE SURROUNDING AREA IS RESIDENTIAL LOTS INCLUDING HOUSES.

SURFACE EXPLORATION

THE SCOPE OF THE EXPLORATION AND ANALYSIS INCLUDED A RECONNAISSANCE OF THE PROJECT SITE, DRILLING 2 TEST BORINGS TO A DEPTH OF APPROXIMATELY 29.5 TO 30 FEET BELOW THE EXISTING PAVEMENT GRADES, A LABORATORY TESTING PROGRAM, AND AN ENGINEERING ANALYSIS AND EVALUATION OF THE SUBSURFACE MATERIALS. THE NUMBER AND LOCATION OF THE TEST BORINGS WERE SELECTED BY THE REPRESENTATIVES OF HATCH MOTT MACDONALD AND FIELD LOCATED BY THE REPRESENTATIVES OF PSI PRIOR TO THE FIELD DRILLING OPERATIONS.

THE BORINGS WERE DRILLED WITH A TRUCK MOUNTED ROTARY DRILL RIG, USING 3.25-INCH I.D. HOLLOW STEM AUGERS TO ADVANCE THE HOLES THROUGH SOIL. DISTURBED SOIL SAMPLES WERE OBTAINED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206) AT CONTINEOUS SAMPLING FOR FULL DEPTHS OF THE BORINGS. THE HAMMER SYSTEM USED WAS LAST CALIBRATED ON OCTOBER 25, 2011, AND THE AVERAGE DRILL ROD ENERGY RATIO (ER) IS 60.8% (D-50 TRUCK MOUNTED). UNDISTURBED SOIL SAMPLES WERE OBTAINED AT THE DEPTHS SHOWN ON THE LOGS AND IN THE PROFILE, IN ACCORDANCE WITH AASHTO T207.

EXPLORATION FINDINGS

THE SURFACE OF THE SITE, AT THE TEST BORING LOCATIONS B-1 AND B-2, WAS COVERED WITH A LAYER OF ASPHALT CONCRETE RANGING FROM APPROXIMATELY 4 TO 8.5 INCHES IN THICKNESS. THE ASPHALT CONCRETE AT THE TEST BORING LOCATIONS B-1 AND B-2 WAS UNDERLAIN BY GRAVEL BASE MATERIALS OF ABOUT 3.5 TO 7 INCHES IN THICKNESS. THE THICKNESS OF THE CONCRETE AND BASE MATERIALS SHOULD BE EXPECTED TO VARY THROUGHOUT THE CONSTRUCTION AREA.

THE BASE MATERIALS WERE UNDERLAIN BY MISCELLANEOUS FILL SOILS TO THE DEPTHS OF ABOUT 10.5 FEET BELOW THE EXISTING PAVEMENT GRADES. THE FILL MATERIALS CONSISTED OF SANDY SILT (A-4a) AND SILT AND CLAY (A-6a), CONTAINING VARYING DEGREES OF ROCK FRAGMENTS, CINDERS, RED BRICKS, AND ORGANICS. THE FILL SOILS EXHIBITED A MOISTURE CONTENT RANGING FROM ABOUT 18 TO 27 PERCENT. THE DEPTH AND ENGINEERING CHARACTERISTICS OF THE FILL MATERIALS, SUCH AS STRENGTH, COMPOSITION AND COMPRESSIBILITY, WILL LIKELY BE VARIABLE.

UNDERLYING THE FILL MATERIALS, NATURAL SOILS WERE ENCOUNTERED AND EXTENDED TO TERMINAL DEPTHS ABOUT 29.5 TO 30 FEET BELOW THE EXISTING PAVEMENT GRADES. THE NATURAL SOILS CONSISTED OF SANDY SILT (A-4a) AND SILT AND CLAY (A-6a) WITH VARYING DEGREES OF GRAVEL AND ROCK FRAGMENTS. THE NATURAL SOILS EXHIBITED A MOISTURE CONTENT RANGING FROM ABOUT 11 TO 19 PERCENT. THE NATURAL SOILS EXHIBITED A VERY STIFF TO HARD CONSISTENCY, BASED ON THE STANDARD PENETRATION TESTS.

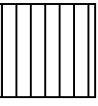
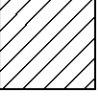
SPECIFICATIONS

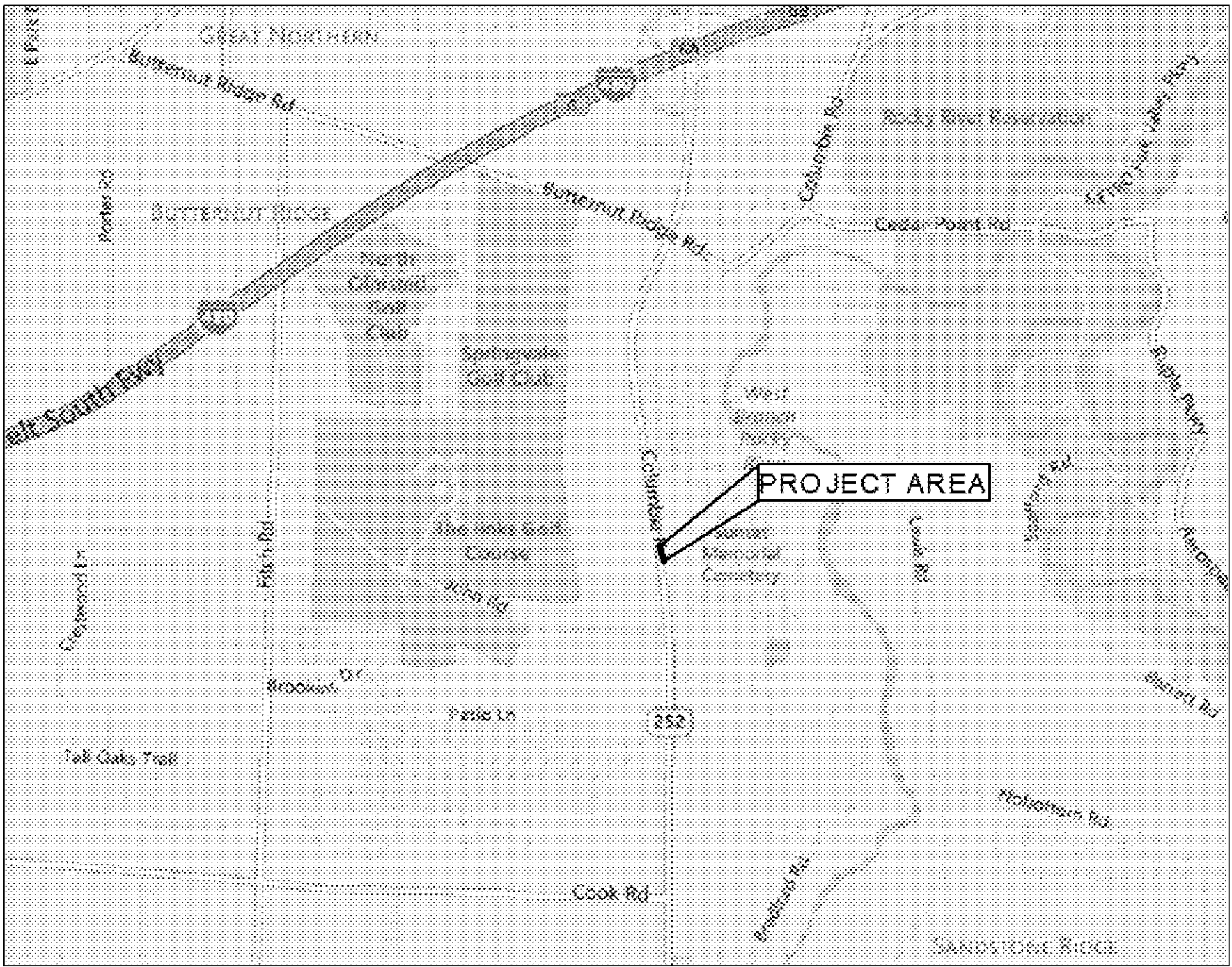
THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JANUARY 2012.

AVAILABLE INFOAMATION

ALL AVAILABLE SOIL INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE ODOT DISTRICT 12 OFFICE, 5500 TRANSPORTATION BOULEVARD, GARFIELD HEIGHTS, OHIO 44125.

LEGEND

DESCRIPTION	ODOT CLASS	CLASSIFIED	
		MECH.	VISUAL
 SANDY SILT	(A-4a) (6)	3	5
 SILT AND CLAY	(A-6a) (9)	4	8
	TOTAL	7	13
 PAVEMENT AND BASE	VISUAL		
 BORING LOCATION - PLAN VIEW			
 DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.			
 INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO			
 INDICATES WATER CONTENT IN PERCENTAGE			
 INDICATES STATATIC WATER ELEVATION AT COMPLETION			
 INDICATES STATIC WATER ELEVATION DURING DRILLING			
 INDICATES NON PLASTIC SAMPLE.			
 INDICATES A SPLIT SPOON SAMPLE, STANDARD PENETRATION TEST.			
 INDICATES AN AUGER SAMPLE			



LOCATION MAP
(NOT TO SCALE)

PARTICLE SIZE DEFINITIONS

12"	3"	2.0 mm	0.42 mm	0.074 mm	0.005 mm	
BOULDERS	COBBLES	GRAVEL	COARSE SAND	FINE SAND	SILT	CLAY
		NO. 10 SIEVE	NO. 40 SIEVE	NO. 200 SIEVE		

RECON	-	NA	02/23/2012
DRILLING	-	PSI	02/27/2012
DRAWN	-	AC	03/02/2012
REVIEW	-	AV	03/06/2012

