

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

SCI-73-1.10
VILLAGE OF RARDEN
RARDEN TOWNSHIP
SCIOTO COUNTY

PROJECT DESCRIPTION

THIS PROJECT IS TO REPLACE THE BRIDGE OVER RARDEN CREEK ON A RELOCATED ALIGNMENT DOWNSTREAM OF THE EXISTING STRUCTURE.

EARTH DISTURBED AREA

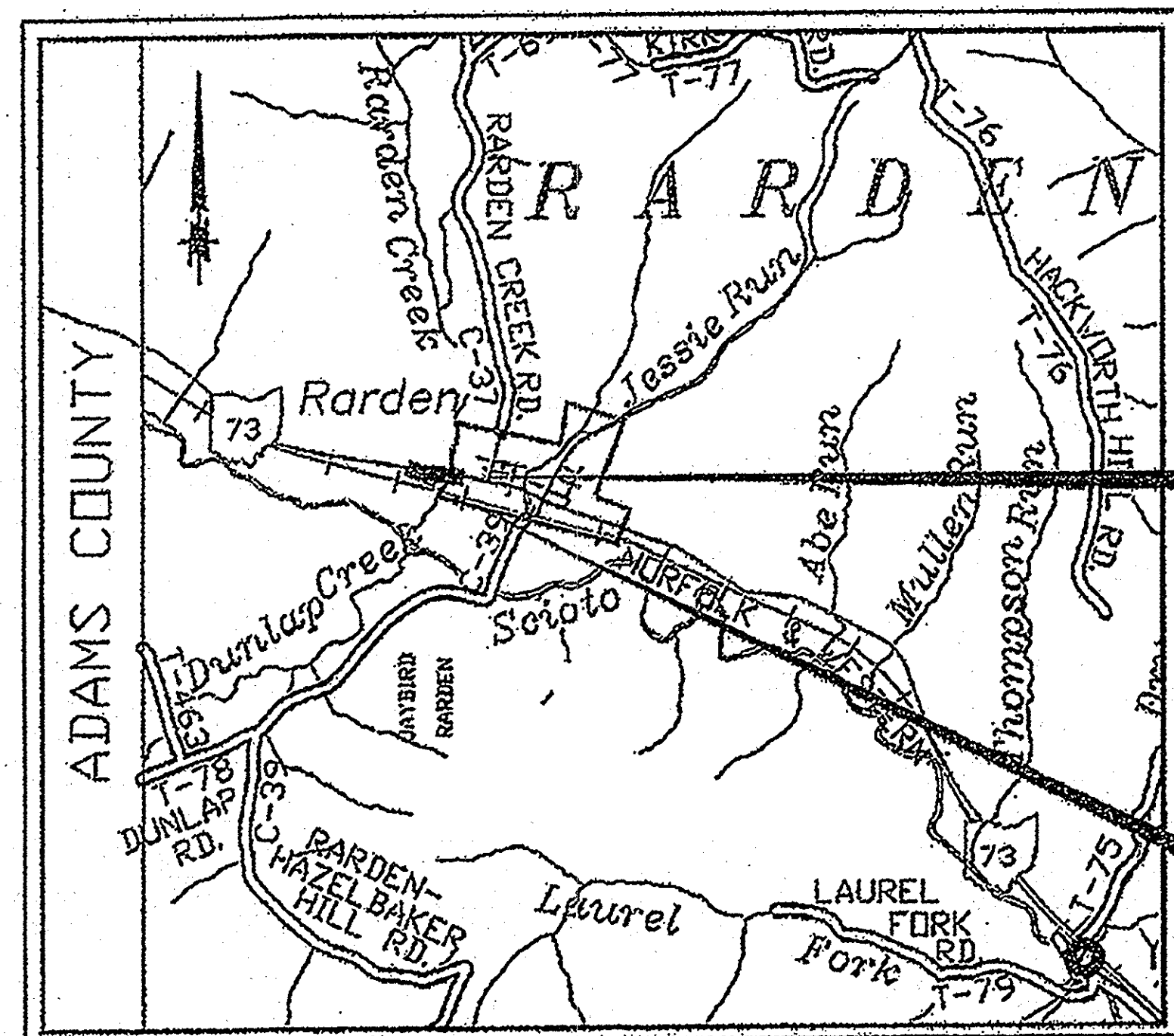
PROJECT EARTH DISTURBED AREA: 3.10 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 4.90 ACRES

2013 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 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

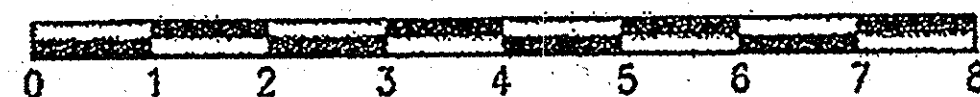
UNDERGROUND UTILITIES
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG
CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY
OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL 1-800-925-0988



LOCATION MAP

LATITUDE: N 38°55'24" LONGITUDE: W 83°14'54"

SCALE IN MILES



Portion to be Improved
State & Federal Routes
Other Roads

DESIGN DESIGNATION

CURRENT ADT (2014) 2300
DESIGN YEAR ADT (2034) 3500
DESIGN HOURLY VOLUME (2034) 350
DIRECTIONAL DISTRIBUTION 60%
TRUCKS (24 HOUR B+C) 16%
DESIGN SPEED 55 MPH (RURAL)
35 MPH (VILLAGE)
LEGAL SPEED 55 MPH (RURAL)
35 MPH (VILLAGE)
DESIGN FUNCTIONAL CLASSIFICATION RURAL COLLECTOR

DESIGN EXCEPTIONS

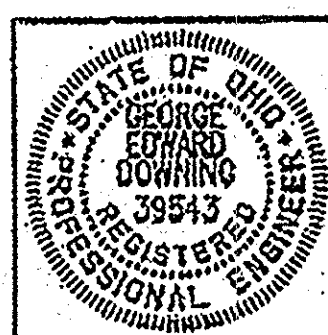
DESIGN FEATURE APPROVAL DATES SHEET NUMBERS
STOPPING SIGHT DISTANCE 07/17/12 17

INDEX OF SHEETS

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PLAN PREPARED BY:

MOODY NOZAN INC.
Architectural Engineering Planning Interior Design
1776 East Broad Street, Columbus, Ohio 43206
Phone: (614) 262-1776 Fax: (614) 259-8003
Columbus Cincinnati Nashville www.moodynozan.com



IBI GROUP
535 Brookside Boulevard
Westerville, OH 43081 USA
contact: Ryan Hutson
tel 614 815-1990 fax 614 815-4901
ibigroup.com

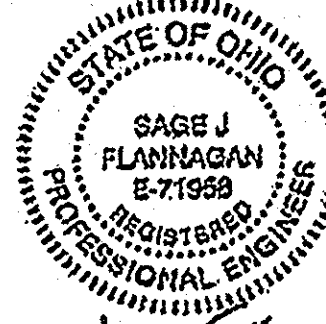
PLAN REVISIONS UPDATED TO CURRENT STANDARDS

ENGINEERS SEAL:

ENGINEERS SEAL:

STRUCTURES

ROADWAY



SIGNED: [Signature]

SIGNED: [Signature]

DATE: 06-26-14

DATE: 6-26-14

STANDARD CONSTRUCTION DRAWINGS

BR-2.3	7/19/13	RM-6.1	10/17/03	MH-1.1	1/18/13	TC-41.20	10/18/13
BR-3.1	4/20/12	CB-1.1	1/18/13	MH-1.2	1/18/13	TC-42.20	1/18/13
BR-4.1	7/19/13	HW-2.1	1/18/13	MT-86.11	1/17/14	TC-82.10	1/18/13
GR-1.1	7/20/12	HW-2.2	1/18/13	MT-86.20	7/19/13	TC-82.20	1/17/14
GR-2.1	7/20/12	DM-1.1	1/18/13	MT-86.26	7/19/13	TC-71.10	1/17/14
GR-3.6	7/20/12	DM-1.4	1/18/13	MT-87.10	7/19/13		
GR-4.2	7/20/12	DM-4.1	7/19/13	MT-89.20	7/19/13		
GR-5.3	4/16/10	DM-4.2	7/20/12	MT-101.70	1/17/14		
RM-1.1	1/18/13	DM-4.3	7/19/13	MT-101.90	7/19/13		
RM-4.2	4/18/14	DM-4.4	7/20/12	MT-105.10	7/19/13		

SUPPLEMENTAL SPECIFICATIONS

800	7/18/14
832	1/17/14
878	10/18/13
902	12/31/12

SPECIAL PROVISIONS

WATERWAY PERMIT
CONDITIONS
4/30/14

Approved Vaughn E. Wilson
Date 6-30-14 District Deputy Director
Approved [Signature]
Date 7-23-14 Director, Department of Transportation

SCI-73-1.10

1/47

NONE

CONSTRUCTION PROJECT NO.

13234

FEDERAL PROJECT NO.
E 070 (066)

SCI-SR 73-1.10 Bridge Replace
140498 PID - 13234
Dist 9 10/2/2014

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

ROUNDING
THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

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

ELECTRIC:
AEP (DISTRIBUTION)
MR. PAUL PAXTON
850 TECH CENTER DR
GAHANNA, OH 43230
(614) 883-6831

WATER:
NORTHWEST REGIONAL WATER DISTRICT
MR. TERRY ALTMAN
P.O. BOX 158
McDERMOTT, OH 45652
(740) 259-2789

ELECTRIC:
AEP (TRANSMISSION)
MS. TINA HAIRSTON
7010 MORRISON RD
GAHANNA, OH 43230
(614) 552-1801

TELEPHONE:
FRONTIER COMMUNICATIONS
MR. PAUL MONTAVON
1315 ALBERT ST
PORTSMOUTH, OH 45662
(740) 354-0512

CABLE:
TIME WARNER CABLE
MR. TERRY ALLEN
3760 INTERCHANGE DR
COLUMBUS, OH 43204-4131
(614) 255-6349

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.

NOTIFICATION OF UTILITIES:
THE UTILITIES SHOWN ON THESE PLANS HAVE BEEN LOCATED THROUGH A RESEARCH OF HISTORICAL CONSTRUCTION PLANS AND THROUGH A FIELD SEARCH. HOWEVER, THE ACCURACY OF THEIR LOCATIONS CANNOT BE GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FIELD LOCATION AND MARKING OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT ALL UTILITIES HAVING INSTALLATIONS IN THE AREA OF WORK TO SECURE AND AFFIRM DATA ON UTILITY LOCATIONS. THESE AGENCIES AND UTILITIES SHALL BE NOTIFIED PRIOR TO ANY EXCAVATIONS IN AREAS CONTAINING THEIR INSTALLATIONS IN CONFORMANCE WITH THE POLICIES OF THE INDIVIDUAL AGENCIES AND UTILITIES.

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

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

ELEVATION DATUM
DESCRIBED BY NATIONAL GEODETIC SURVEY 1935 AT RARDEN, SCIOTO COUNTY, 55 YARDS WEST OF THE SOUTHWEST CORNER OF THE NORFOLK AND WESTERN RAILWAY STATION, 96 YARDS EAST OF MILEPOST C 82, 21 YARDS EAST OF SIGNAL TOWER C 2496, 31 FEET NORTHWEST OF THE NORTHWEST CORNER OF BRIDGE 2019, 21 FEET NORTH OF THE NORTH RAIL, AND ABOUT 3 FEET LOWER THAN THE TRACK. A UNITED STATES GEOLOGICAL SURVEY STANDARD CAP, STAMPED OHIO 613 AND RIVETED ON THE TOP OF A 3-1/2" INCH IRON PIPE.

NAVD 88
ELEVATION= 612.33'

MONUMENTS
MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS AS SHOWN ON THE STANDARD CONSTRUCTION DRAWING RM-1.1 AND AT THE LOCATIONS SHOWN ON SHEET NOS. 42, 45-47.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 623, REFERENCE MONUMENT 16 EACH

ITEM 204 - EXCAVATION OF SUBGRADE
IF UNSUITABLE FOUNDATION SOILS ARE ENCOUNTERED IN THE AREAS OF THE PROPOSED ROADBED, THEY SHALL BE REMOVED AND REPLACED WITH ITEM 204, GRANULAR MATERIAL, TYPE B. THE LOCATIONS AND DIMENSIONS WILL BE DETERMINED BY THE ENGINEER. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 204, EXCAVATION OF SUBGRADE 500 CU. YD.

ITEM 204, GRANULAR MATERIAL, TYPE B 500 CU. YD.

ITEM 204 - PROOF ROLLING
THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204, PROOF ROLLING 3 HOUR

ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE
THE RATE OF APPLICATION OF THE 407 TACK COAT FOR INTERMEDIATE COURSE SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. FOR ESTIMATING PURPOSES ONLY, THE PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF:

ITEM 407, TACK COAT FOR INTERMEDIATE COURSE APPLIED @ 0.04 GAL. PER SQ. YD.

DEMOLITION DEBRIS
THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT DEMOLITION DEBRIS FROM ENTERING THE STREAM. ANY MATERIAL THAT FALLS INTO THE STREAM SHALL BE REMOVED AS SOON AS POSSIBLE.

STREAM CHANNEL EXCAVATION
THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE EXCAVATION AND HAULING OF MATERIAL FROM THE STREAM CHANNEL. THIS PERTAINS TO ANY EXCAVATION OPERATIONS SUCH AS, FOUNDATION, PIER, OR ABUTMENT EXCAVATION, CHANNEL CLEANOUT, EXCAVATION FOR ROCK CHANNEL PROTECTION AND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS.

ITEM 659 - SEEDING AND MULCHING
THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

ITEM 659, SEEDING AND MULCHING 6,731 SQ. YD.

ITEM 659, REPAIR SEEDING AND MULCHING 337 SQ. YD.

ITEM 659, COMMERCIAL FERTILIZER 1.03 TON

ITEM 659, LIME 1.58 ACRE

ITEM 659, WATER 41 M. GAL.

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

FENCE LENGTHS
THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 807.

FARM DRAINS
ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROAD-WAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE (RIGHT OF WAY) (CONSTRUCTION) LIMITS BY ITEM 611, CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETED INTO THE ROADWAY DITCH BY 611 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 611, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

EROSION CONTROL PADS AND ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 611, 6" CONDUIT, TYPE B 300 FT.

ITEM 611, 6" CONDUIT, TYPE E 200 FT.

ITEM 611, 8" CONDUIT, TYPE B 200 FT.

ITEM 611, 8" CONDUIT, TYPE F 200 FT.

ITEM 601, ROCK CHANNEL PROTECTION, TYPE C WITH FILTER 16 CU. YD.

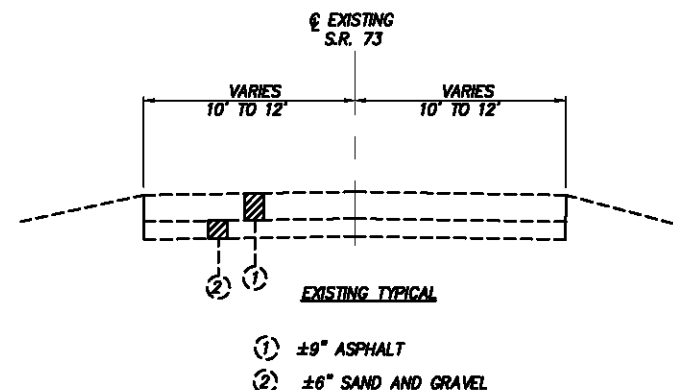
ITEM 605 - AGGREGATE DRAINS
AGGREGATE DRAINS SHALL BE PLACED AT 50 FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, STAGGERED SO THAT EACH DRAIN IS 25 FEET FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE, AND AT 25 FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF SAG VERTICAL CURVES.

THE AGGREGATE DRAINS SHALL BE PLACED AT THE FOLLOWING APPROXIMATE STATIONS:

57+25 LT. 64+68 LT.
57+50 RT. 65+75 RT.
57+75 LT. 66+00 RT.
58+00 RT. 66+25 RT.
58+25 LT. 66+50 RT.
58+50 RT. 66+75 RT.
62+00 LT. 67+00 RT.
62+25 LT. 67+25 RT.
62+75 LT. 67+50 RT.
63+00 LT.
63+25 LT.
64+06 LT.
64+31 LT.
64+56 LT.

SEE SHEET NO. 15 FOR CALCULATIONS.

REMOVAL OF EXISTING ROADWAY
THE CONTRACTOR SHALL REMOVE THE EXISTING ROADWAY WHERE SHOWN IN THE PLANS. THE EXISTING ASPHALT AND BASE COURSES SHALL BE REMOVED AND SHALL BE PAID FOR UNDER ITEM 203, EXCAVATION. THE APPROXIMATE BUILDUP OF THE EXISTING PAVEMENT IS 16" IN DEPTH (9" ASPHALT AND 7" SAND AND GRAVEL, SEE BELOW). AREAS ALONG THE PROJECT MAY NEED FILLED AFTER THE EXISTING ROADWAY HAS BEEN REMOVED (SEE CROSS SECTION SHEETS 22-28). PAYMENT INCLUDED IN ITEM 203, EMBANKMENT.



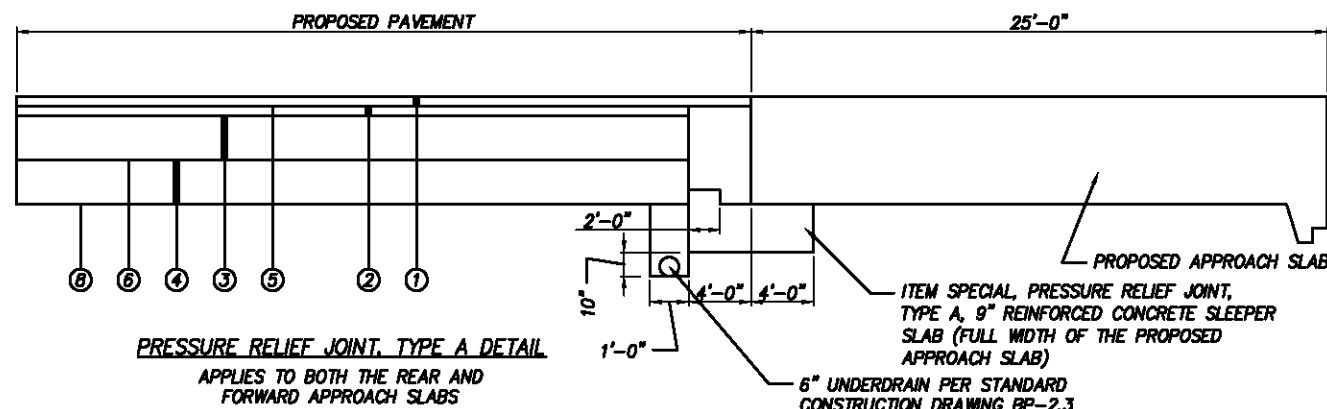
CLEARING AND GRUBBING
REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZE	NO. TREES
12"	15
15"	4
24"	2

SPRING DRAINS
THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR DRAINING ANY SPRINGS SHOWN IN THE PLAN OR ENCOUNTERED DURING CONSTRUCTION. THE FOLLOWING TYPES OF PIPES MAY BE USED: 707.33, 707.41, 707.42 OR 707.45 PERFORATED PER 707.31.

SPRING DRAINS SHALL BE CONSTRUCTED AS SHOWN ON STANDARD CONSTRUCTION DRAWING DM-1.1 AND PAID FOR AT THE CONTRACT PRICE FOR:

ITEM 605, 6" UNCLASSIFIED PIPE UNDERDRAINS FOR SPRINGS 200 FT.
ITEM 605, AGGREGATE DRAINS FOR SPRINGS 200 FT.
ITEM 611, PRECAST REINFORCED CONCRETE OUTLET 4 EACH



LEGEND

- ITEM 448 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE TYPE 1, PG64-22
- ITEM 448 - 1 1/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
- ITEM 301 - 9" ASPHALT CONCRETE BASE, PG64-22
- ITEM 304 - 6" AGGREGATE BASE
- ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY
- ITEM 408 - PRIME COAT @ 0.4 GAL/SY
- ITEM 204 - SUBGRADE COMPACTION

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May 18, 2014, 12:00pm

ITEM 606 – ANCHOR ASSEMBLY, TYPE E
THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL
END TERMINALS AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER
ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS.
INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN
ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF
TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF,
AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE
TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE
GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN
APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED
GUARDRAIL HEIGHT OF 27.75 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF
THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND
LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM
606, ANCHOR ASSEMBLY, TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS,
EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND
FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL
RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT
AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE
MANUFACTURER.

ITEM 202 – SPECIAL PARKING BLOCK REMOVED AND RESET
THE CONTRACTOR SHALL REMOVE THE EXISTING PARKING BLOCKS AND
APPURTENANCES. THE PARKING BLOCKS SHALL BE STORED FOR REUSE DURING
CONSTRUCTION. FOLLOWING THE CONSTRUCTION OF THE PARKING AREA, THE
PARKING BLOCKS SHALL BE INSTALLED PER ODOT STANDARD CONSTRUCTION
DRAWING RM-6.1. IF ANY OF THE PARKING BLOCKS ARE DAMAGED DURING
REMOVAL, STORAGE, OR INSTALLATION, THE CONTRACTOR SHALL REPLACE IT IN
KIND AT THE CONTRACTOR'S EXPENSE. ALL COSTS TO COMPLETE THIS ITEM,
INCLUDING LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS, SHALL BE INCLUDED
IN THE UNIT PRICE BID FOR ITEM 202 – SPECIAL PARKING BLOCK REMOVED AND
RESET.

ITEM 630 – REMOVAL OF GROUND MOUNTED SIGN AND REERECTION, AS PER PLAN
REMOVE AND RELOCATE THE GROUND MOUNTED SIGNS TO THE LOCATIONS SHOWN
IN THE PLANS. THE CONTRACTOR SHALL CAREFULLY REMOVE/DISASSEMBLE THE
EXISTING SIGNS FROM THE GROUND MOUNTED POSTS PRIOR TO REMOVING THE
EXISTING GROUND MOUNTED POST SUPPORTS. IF NECESSARY, THE CONTRACTOR
SHALL PROVIDE NEW POST SUPPORTS FOR THE RELOCATED SIGN SIMILAR IN SIZE,
MATERIALS AND COLOR IF THE EXISTING SIGN SUPPORTS ARE NOT REUSABLE. THE
CONTRACTOR SHALL PROVIDE FOUNDATIONS SIMILAR TO THE EXISTING REMOVED
POST SUPPORTS.

ALL COSTS ASSOCIATED WITH THE ABOVE MENTIONED WORK INCLUDING MATERIALS,
LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO REMOVE AND RELOCATE THE
EXISTING SIGN SUPPORTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM
630, REMOVAL OF GROUND MOUNTED SIGN AND REERECTION, AS PER PLAN.

ITEM 614 – MAINTAINING TRAFFIC (AT ALL TIMES)
A MINIMUM OF 1 LANE(S) OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC AND ITEM 615, ROADS FOR MAINTAINING TRAFFIC.

NO WORK CAN BEGIN UNTIL MARCH 1, 2015 UNLESS APPROVED BY THE DCA

ITEM 614 – MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS 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	LABOR DAY
MEMORIAL DAY	THANKSGIVING
	(OTHER HOLIDAY OR EVENT)

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 THROUGH 12:00N MONDAY
MONDAY	12:00N FRIDAY THROUGH 12:00N TUESDAY
TUESDAY	12:00N FRIDAY THROUGH 12:00N WEDNESDAY
WEDNESDAY	12:00N FRIDAY THROUGH 12:00N THURSDAY
THURSDAY	12:00N FRIDAY THROUGH 12:00N FRIDAY
THURSDAY (THANKSGIVING ONLY)	12:00N FRIDAY THROUGH 12:00N MONDAY
FRIDAY	12:00N FRIDAY THROUGH 12:00N MONDAY
SATURDAY	12:00N FRIDAY THROUGH 12:00N MONDAY

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN 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 – MAINTAINING TRAFFIC (LANE CLOSURE/REDUCTION REQUIRED)
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.

BEFORE THE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAME(S) AND TELEPHONE NUMBER(S) OF A PERSON OR PERSONS WHO CAN BE CONTACTED TWENTY-FOUR (24) HOURS PER DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION AND ALL INTERESTED POLICE AGENCIES. THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR PLACING OR REPLACING NECESSARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

THE CONTRACTOR WILL ADVISE THE DISTRICT PUBLIC INFORMATION OFFICER AT (740) 774-8834, OR FAX (740) 773-2710 SEVEN (7) DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE PROJECT ENGINEER WILL PROVIDE ASSISTANCE/CLARIFICATION FOR ANY QUESTIONS.

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.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL "AS DIRECTED BY THE ENGINEER." THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR DUST CONTROL PURPOSES.

ITEM 616, WATER 15 M. GAL

FULLY-ACTUATED OPERATION OF WORK ZONE TRAFFIC SIGNAL
THE WORK ZONE SIGNAL CONTROL REQUIRED FOR THIS PROJECT AND SHOWN ON SHEETS 8-12 AND TRAFFIC SCDs MT- 96.11, 96.20 AND 96.26 SHALL BE FULLY TRAFFIC-ACTUATED AND OPERATE IN A MANNER SIMILAR TO THAT DESCRIBED IN SECTION 733.02 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

THE INITIAL CONTROLLER TIMING SHALL BE AS FOLLOWS:

	PHASE *			
	1 (ALL RED) DUMMY PHASE	2 MAINLINE (DIRECTION) ¹	3 (ALL RED) DUMMY PHASE	4 MAINLINE (DIRECTION) ¹
MIN. GREEN	T _{1c1} -6+/-	10	T _{1c3} -6+/-	10
EXTENSION	N/A	4	N/A	4
MAX. GREEN	T _{1c1} -5+/-	30	T _{1c3} -5+/-	30
YELLOW	3	3.5	3	3.5
ALL RED	2	2	2	2
RECALL	MAX.	MIN.	MAX.	MIN.

*PHASES AS SHOWN ON TRAFFIC SCD MT-96.20 FOR ACTUATED CONTROL. ADD MORE PHASES AS NEEDED TO ACCOMMODATE SIDE STREETS, DRIVEWAYS, ETC.

+/- PROVIDE TIMING FOR THE SIGNAL LOCATION UNDER CONSIDERATION. T_{1c1} IS THE DESIRED INTERNAL CLEARANCE TIME FOR PHASE 1. T_{1c3} IS THE DESIRED INTERNAL CLEARANCE TIME FOR PHASE 3. USUALLY, T_{1c1} = T_{1c3}

INDICATE DIRECTION OF GREEN.

THE CONTRACTOR SHALL ALSO DESIGN, FURNISH, INSTALL AND MAINTAIN A TRAFFIC DETECTOR ON EACH TRAFFIC APPROACH WHICH WILL RELIABLY DETECT ALL LEGAL TRAFFIC APPROACHING (BUT NOT LEAVING) THE SIGNAL AS IT PASSES OR WAITS IN THE DESIGNATED DETECTOR ZONE IN THE PLANS. DETECTOR DESIGNS WHICH DO NOT PROVIDE RELIABLE DETECTION, FREE FROM FALSE CALLS, SHALL BE IMMEDIATELY REPLACED BY THE CONTRACTOR.

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL AND ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE B 144 EACH
ITEM 614, OBJECT MARKER, TWO WAY 144 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

DELINEATION OF TEMPORARY AND PERMANENT GAURDRAIL

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL AND ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE B 30 EACH
ITEM 614, OBJECT MARKER, TWO WAY 30 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEM(S).

ITEM 614 – LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS
USE OF LAW ENFORCEMENT OFFICERS (LEOs) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOs SHOULD NOT BE USED WHERE THE Omutcd INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE Omutcd, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.
- DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE Omutcd, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOs SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.
- WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

LEOs SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED RECKLESS, THEN PURSUIT OR THE MOTORIST IS APPROPRIATE.

THE LEOs WORK AT THE DIRECTIONS OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOs WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF PLANS WITH RESPECT TO DUTIES OF THE LEOs. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOs' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOs (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 40 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

CONSTRUCTION PHASING

THROUGH TRAFFIC SHALL BE MAINTAINED AT ALL TIMES UTILIZING THE EXISTING, PROPOSED, AND PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B.

AT THE START OF PHASE I, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, SHALL BE PLACED ALONG THE LEFT SIDE OF THE EXISTING PAVEMENT FROM STATION 56+00 TO STATION 66+79 AND WORK ZONE TRAFFIC SIGNAL AND LIGHTING SHALL BE INSTALLED.

DURING THE HOURS WORK IS PERFORMED ONE-WAY TWO-LANE TRAFFIC IS TO BE MAINTAINED BY FLAGGERS AS PER STANDARD DRAWING MT-97.10.

PHASE I
ONE-LANE, TWO-WAY TRAFFIC SHALL BE MAINTAINED ON THE EXISTING AND PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, UTILIZING A WORK ZONE TRAFFIC SIGNAL.

A PORTION OF THE EXISTING BRIDGE, FORWARD WINGWALL, AND PAVEMENT IS TO BE REMOVED TO PROVIDE ROOM TO CONSTRUCT THE PROPOSED BRIDGE. THE EXISTING BRIDGE DECK IS NOT TO BE IMPACTED BY THIS WORK.

THE PROPOSED PAVEMENT IS TO BE CONSTRUCTED THROUGH THE INTERMEDIATE COURSE, FROM STATION 61+50 TO STATION 66+25. THE PROPOSED BRIDGE AND APPROACH SLAB CONSTRUCTION IS TO BE COMPLETED AND GUARDRAIL INSTALLED DURING THIS PHASE.

PHASE II

ONE-LANE, TWO-WAY TRAFFIC IS TO BE MAINTAINED ON THE EXISTING AND PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, UTILIZING A WORK ZONE TRAFFIC SIGNAL.

THE RIGHT SIDE PORTION OF THE PROPOSED PAVEMENT IS TO BE CONSTRUCTED THROUGH THE INTERMEDIATE COURSE FROM STATION 57+25 TO STATION 61+50.

PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, IS TO BE PLACED FROM STATION 66+25 TO STATION 71+89 AS PER DETAILS. THIS IS TO BE PLACED JUST PRIOR TO PHASE III. TRAFFIC IS TO BE MAINTAINED BY FLAGGERS DURING WORK HOURS.

PHASE III

ONE-LANE, TWO-WAY TRAFFIC IS TO BE MAINTAINED ON THE EXISTING, PROPOSED, AND PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, UTILIZING A WORK ZONE TRAFFIC SIGNAL.

THE LEFT SIDE OF THE PROPOSED PAVEMENT SHALL BE CONSTRUCTED THROUGH THE INTERMEDIATE COURSE, FROM STATION 57+25 TO STATION 61+50. PORTIONS OF THE EXISTING FACILITY MAY BE REMOVED.

PHASE IV

ONE-LANE, TWO-WAY TRAFFIC SHALL BE MAINTAINED ON THE PROPOSED AND PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, UTILIZING A WORK ZONE TRAFFIC SIGNAL.

THE LEFT SIDE OF THE PROPOSED PAVEMENT SHALL BE CONSTRUCTED THROUGH THE INTERMEDIATE COURSE FROM STATION 66+25 TO STATION 71+00.

PHASE V

ONE-LANE, TWO-WAY TRAFFIC SHALL BE MAINTAINED ON THE PROPOSED PAVEMENT UTILIZING A WORK ZONE TRAFFIC SIGNAL.

THE RIGHT SIDE OF THE PROPOSED PAVEMENT SHALL BE CONSTRUCTED THROUGH THE INTERMEDIATE COURSE FROM STATION 66+25 TO STATION 71+00.

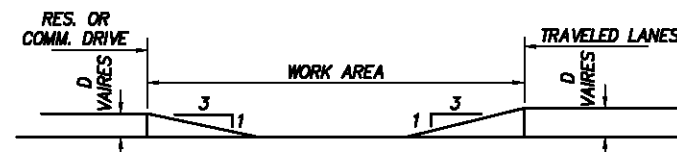
PHASE VI

ONE-LANE, TWO-WAY TRAFFIC SHALL BE MAINTAINED DURING WORK HOURS BY FLAGGERS. AT ALL OTHER TIMES, TWO-LANE, TWO-WAY TRAFFIC SHALL BE MAINTAINED.

THE FINAL COURSE, PAVEMENT MARKINGS, AND TRAFFIC CONTROL DEVICES SHALL BE INSTALLED.

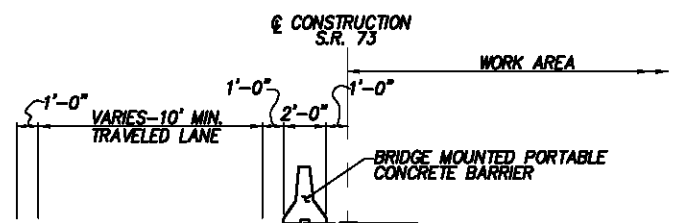
LOCAL ACCESS

INGRESS AND EGRESS SHALL BE MAINTAINED TO ALL RESIDENTIAL AND COMMERCIAL PROPERTIES. WHERE WORK ZONE ELEVATIONS BETWEEN DRIVES AND TRAVELED LANES EXCEED 1", A WEDGE TRANSITION SHALL BE PROVIDED. WEDGE MATERIAL SHALL BE EITHER GRAVEL OR ASPHALT AND SHALL BE REMOVED PRIOR TO PLACING THE ABUTTING PAVEMENT COURSE. THE TRANSITION SHALL BE AS FOLLOWS:

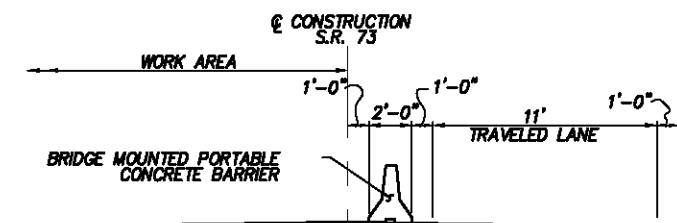


DRIVEWAY CLOSURE MAY BE NECESSARY TO ENABLE WORK ON OR IN FRONT OF A DRIVE. THE CONTRACTOR SHALL GIVE THE PROPERTY OWNER NOTIFICATION 48 HOURS IN ADVANCE OF CLOSURE. CLOSURE IS PERMITTED ONLY DURING WORK HOURS AND ACCESS MUST BE RETURNED AT THE END OF EACH WORKING DAY. PROPERTIES WITH MULTIPLE DRIVES MAY HAVE ONE DRIVE CLOSED AT A TIME, WHILE WORK IS PERFORMED IN THE AREA OF THE CLOSED DRIVE.

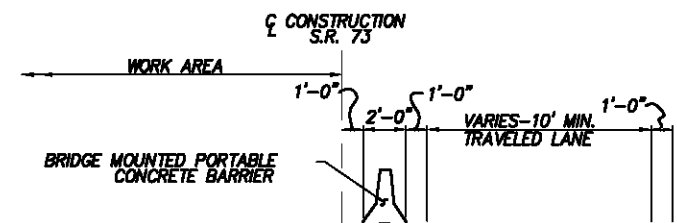
MAINTENANCE OF TRAFFIC SECTIONS
SEE MAINTENANCE OF TRAFFIC SHEETS FOR PHASE PLAN VIEW



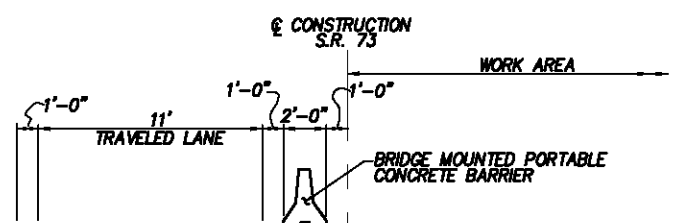
SECTION A-A
PHASE II



SECTION B-B
PHASE III



SECTION C-C
PHASE IV



SECTION D-D
PHASE V

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B
WORK ZONE PAVEMENT SHALL BE PLACED DURING THE FOLLOWING MAINTENANCE OF TRAFFIC PHASES IN THESE LOCATIONS:

PHASE I

WESTBOUND:

STA. 56+00 TO STA. 57+25 = 125 FT
[125' X ((3.0'+4.5')/2)]/9 = 52.1 SQ YD
STA. 57+25 TO STA. 58+89 = 164 FT
[164' X ((4.5'+3.5')/2)]/9 = 72.9 SQ YD
STA. 58+89 TO STA. 59+75 = 86 FT
[86' X ((3.5'+4.0')/2)]/9 = 35.8 SQ YD
STA. 59+75 TO STA. 60+56 = 81 FT
[81' X ((4.0'+5.0')/2)]/9 = 40.5 SQ YD
STA. 60+56 TO STA. 65+00 = 444 FT
[444' X 5.0']/9 = 246.7 SQ YD
STA. 65+63 TO STA. 66+79 = 116 FT
[116' X 2.0']/9 = 25.8 SQ YD

PHASE II

WESTBOUND:

STA. 68+25 TO STA. 68+77 = 52 FT
[52' X 2.0']/9 = 11.6 SQ YD
EASTBOUND:
STA. 68+25 TO STA. 70+80 = 255 FT
[255' X ((8.0'+5.0')/2)]/9 = 184.2 SQ YD
STA. 70+80 TO STA. 71+89 = 109 FT
[109' X ((5.0'+2.0')/2)]/9 = 42.4 SQ YD
WESTBOUND & EASTBOUND:
STA. 68+25 TO STA. 68+25 = 200 FT
[200' X 30.0']/9 = 666.7 SQ YD

TOTAL = 1378.7 SQ YD
USE 1379 SQ YD

QUANTITY CARRIED TO GENERAL SUMMARY

ITEM 622 - PORTABLE BARRIER, 32"

PHASE I:

STA. 63+88 TO STA. 64+87 (TAPERED) = 100 FT
STA. 66+25 TO STA. 66+75 (TAPERED) = 50 FT
PHASE II:
STA. 56+25 TO STA. 57+25 (TAPERED) = 110 FT
STA. 65+60 TO STA. 66+07 (TAPERED) = 50 FT
PHASE III:
STA. 56+75 TO STA. 57+25 (TAPERED) = 50 FT
STA. 61+50 TO STA. 62+50 (TAPERED) = 100 FT
PHASE IV:
STA. 63+99 TO STA. 64+49 (TAPERED) = 50 FT
STA. 71+00 TO STA. 72+00 (TAPERED) = 100 FT
PHASE V:
STA. 63+99 TO STA. 64+49 (TAPERED) = 50 FT
STA. 71+00 TO STA. 72+00 (TAPERED) = 100 FT
TOTAL = 780 FT

QUANTITY CARRIED TO GENERAL SUMMARY

ITEM 622 - PORTABLE BARRIER, 32", BRIDGE MOUNTED

PHASE I:

STA. 64+87 TO STA. 66+27 = 140 FT
PHASE II:
STA. 57+25 TO STA. 65+60 = 835 FT
PHASE III:
STA. 57+25 TO STA. 61+50 = 425 FT
PHASE IV:
STA. 64+50 TO STA. 71+00 = 650 FT
PHASE V:
STA. 64+50 TO STA. 71+00 = 650 FT
TOTAL = 2700 FT

QUANTITY CARRIED TO GENERAL SUMMARY

WORK ZONE MARKINGS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS PER THE REQUIREMENTS OF CMS 614.04 AND 614.11.

ITEM 614 WORK ZONE CENTER LINE, CLASS II, 642 PAINT

PHASE I:

STA. 61+98 TO STA. 63+48 = 150 FT
STA. 67+47 TO STA. 68+97 = 150 FT
STA. 68+29 TO STA. 69+79 = 150 FT
TOTAL = 450 FT = 0.09 MILE

QUANTITY CARRIED TO GENERAL SUMMARY

ITEM 614 - WORK ZONE CENTER LINE, CLASS II, 740.06 TYPE I

PHASE II:

STA. 54+23 TO STA. 55+73 = 150 FT
PHASE III:
STA. 54+25 TO STA. 55+75 = 150 FT
STA. 62+50 TO STA. 64+00 = 150 FT
PHASE IV:
STA. 61+48 TO STA. 62+98 = 150 FT
STA. 72+65 TO STA. 74+15 = 150 FT
PHASE V:
STA. 61+48 TO STA. 62+98 = 150 FT

TOTAL = 900 FT = 0.17 MILE

QUANTITY CARRIED TO GENERAL SUMMARY

ITEM 614 - WORK ZONE STOP LINE, CLASS I, 642 PAINT

PHASE I:

STA. 63+48 = 12 FT
STA. 67+47 = 10 FT
PHASE II:
STA. 68+29 = 10 FT

TOTAL = 32 FT

QUANTITY CARRIED TO GENERAL SUMMARY

ITEM 614 - WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I

PHASE II:

STA. 55+73 = 11 FT
PHASE III:
STA. 55+75 = 11 FT
STA. 63+00 = 12 FT
PHASE IV:
STA. 62+98 = 11 FT
STA. 72+65 = 15 FT

PHASE V:

STA. 62+98 = 11 FT
STA. 72+65 = 15 FT

TOTAL = 86 FT

QUANTITY CARRIED TO GENERAL SUMMARY

ITEM 614 - WORK ZONE EDGE LINE, CLASS I, 642 PAINT

PHASE I:

STA. 64+15 TO STA. 64+89 = 74 FT

TOTAL = 74 FT = 0.01 MILE

QUANTITY CARRIED TO GENERAL SUMMARY

ITEM 614 - WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I

PHASE II:

STA. 56+25 TO STA. 57+25 = 100 FT

PHASE III:

STA. 61+00 TO STA. 62+00 = 100 FT

PHASE IV:

STA. 71+00 TO STA. 72+00 = 100 FT

PHASE V:

STA. 71+00 TO STA. 72+00 = 100 FT

TOTAL = 400 FT = 0.08 MILE

QUANTITY CARRIED TO GENERAL SUMMARY

ITEM 614 - WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)

PHASE I = 2 EACH

PHASE II = 2 EACH

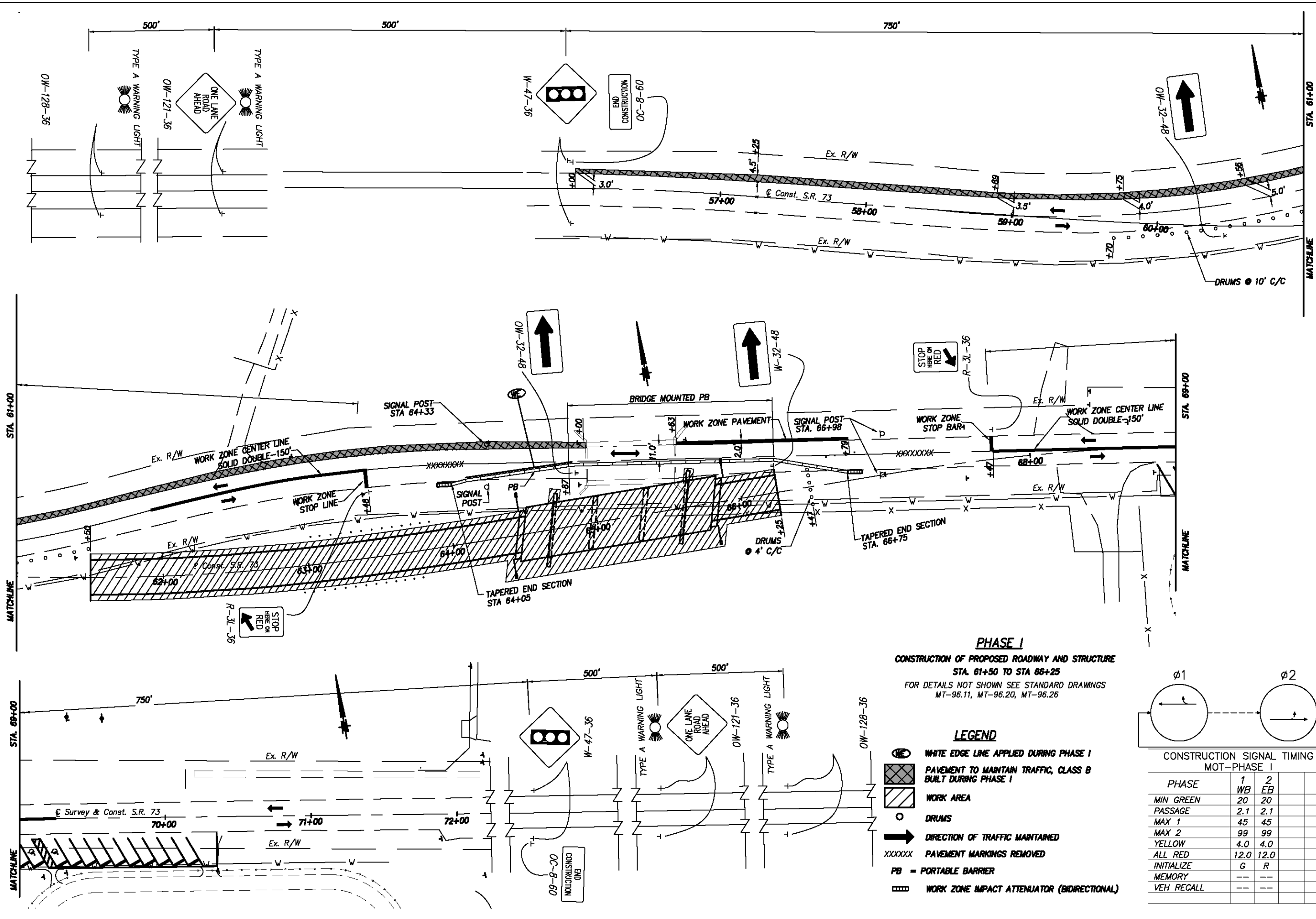
PHASE III = 2 EACH

PHASE IV = 2 EACH

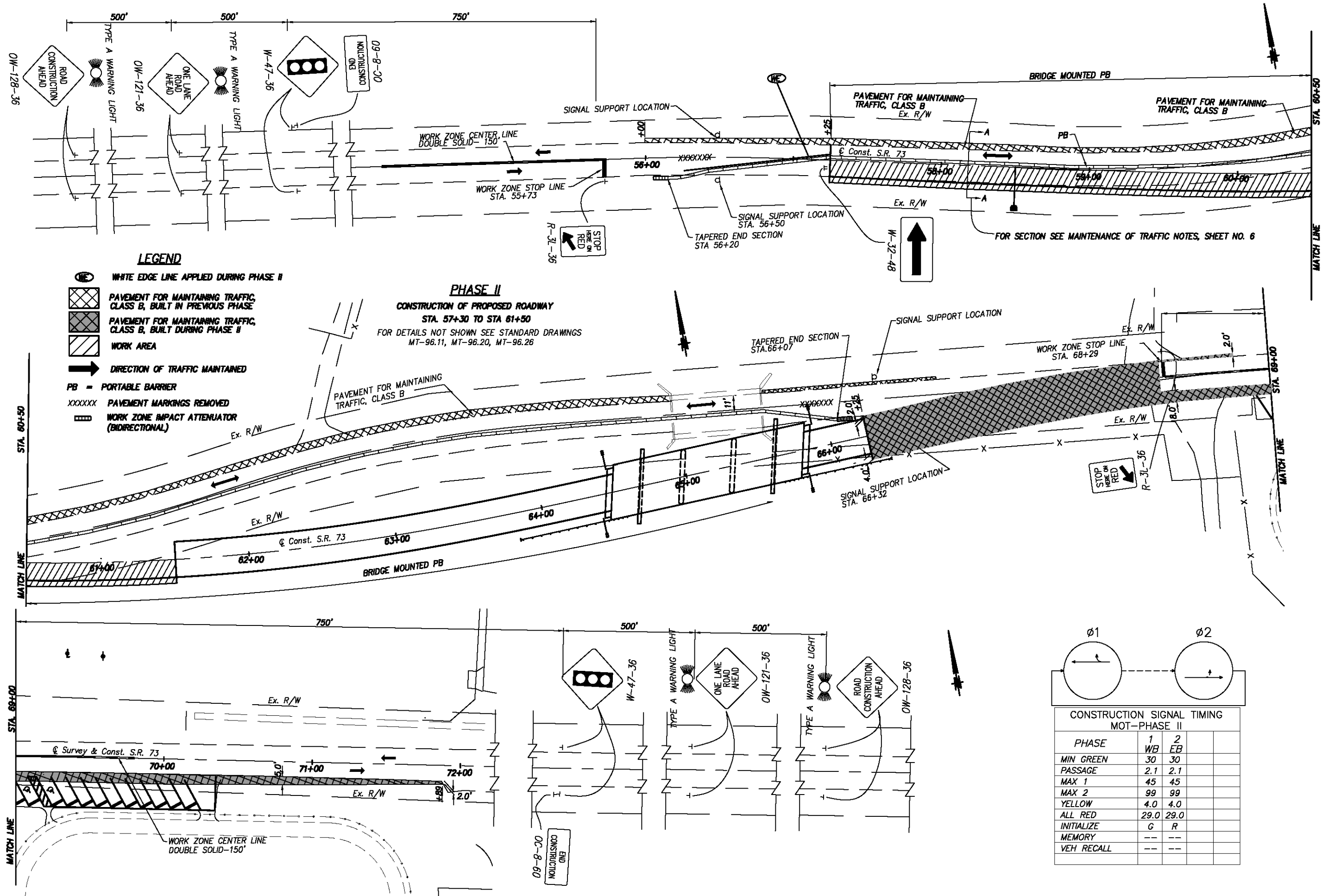
PHASE V = 2 EACH

TOTAL = 10 EACH

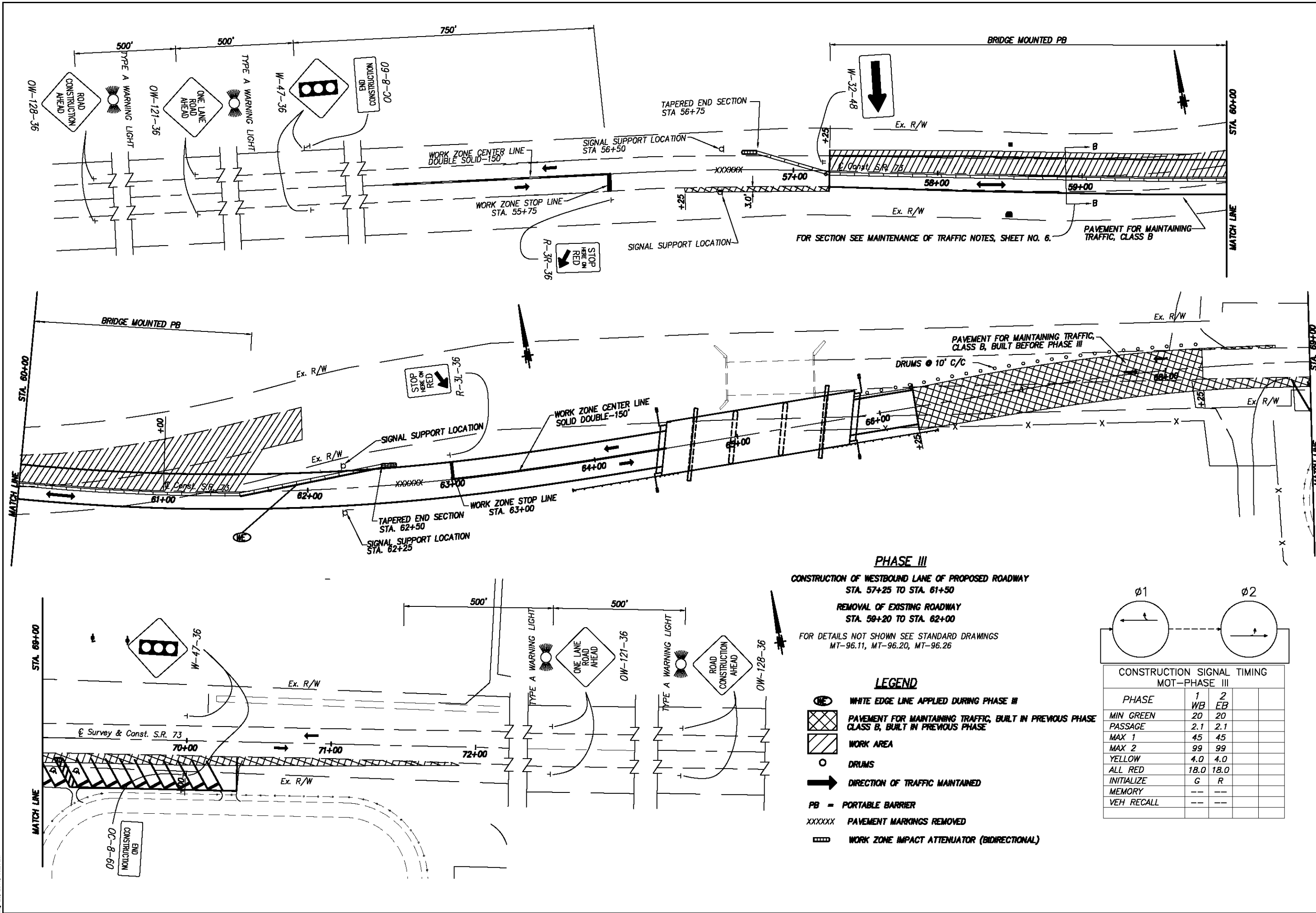
QUANTITY CARRIED TO GENERAL SUMMARY



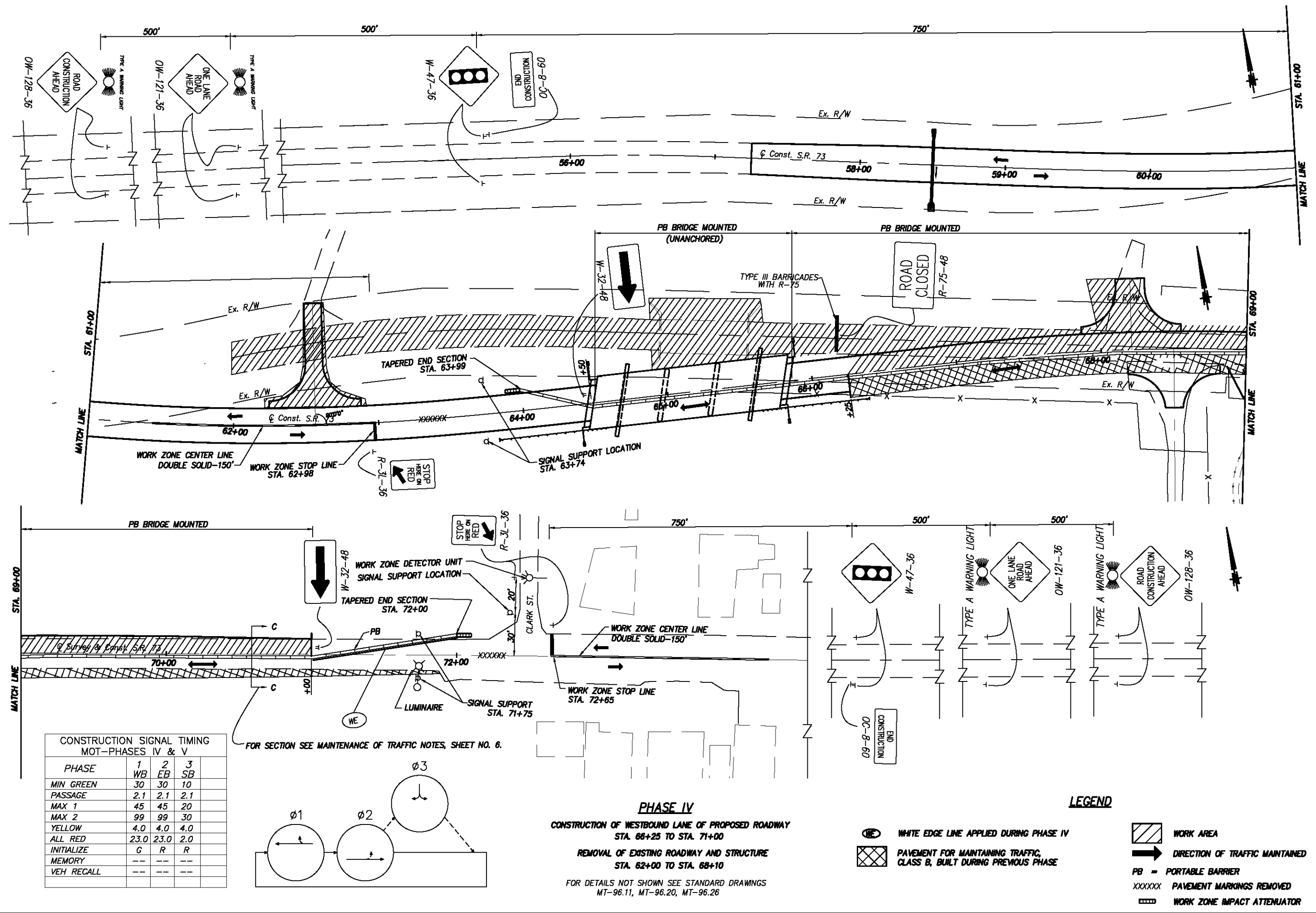
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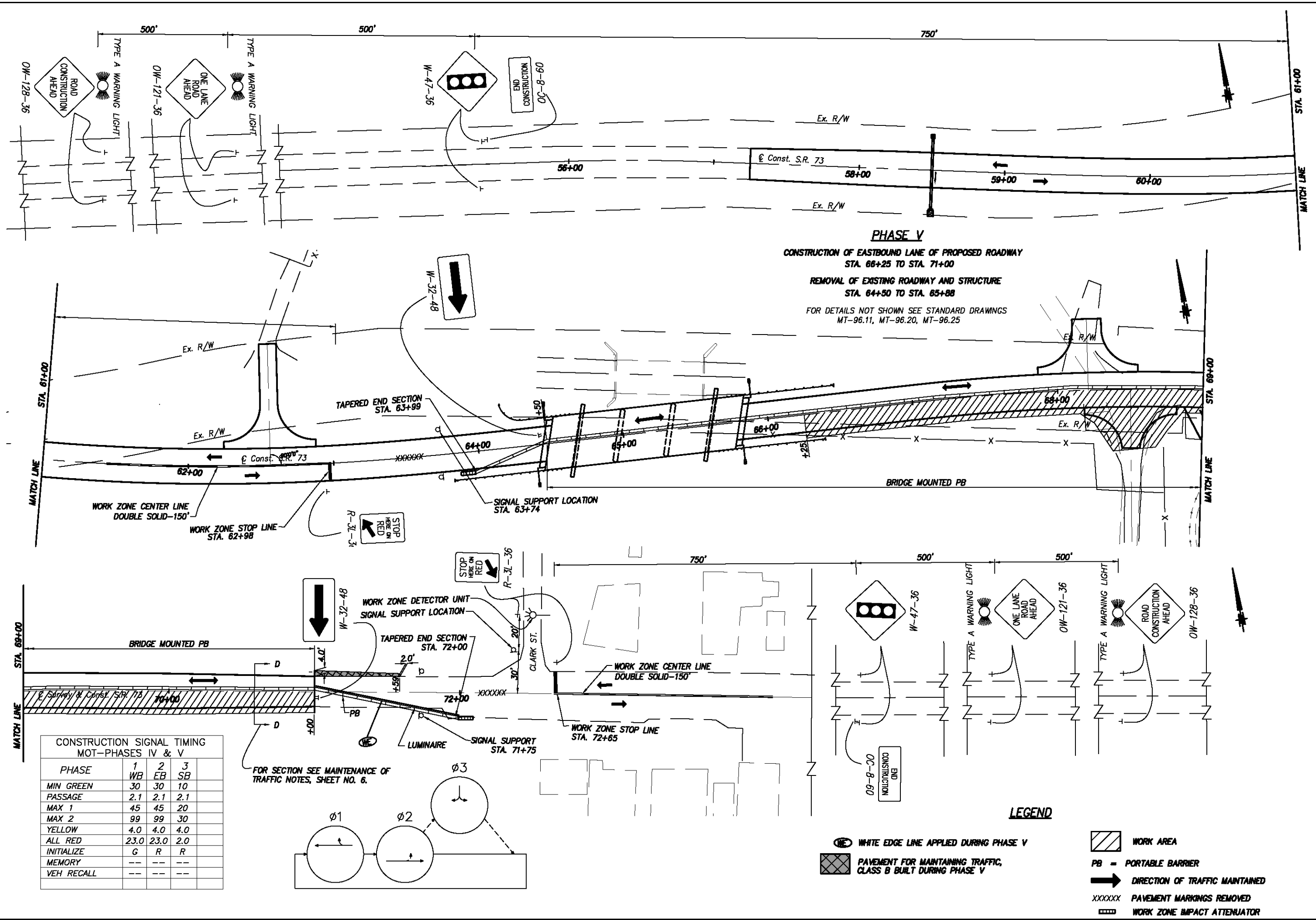
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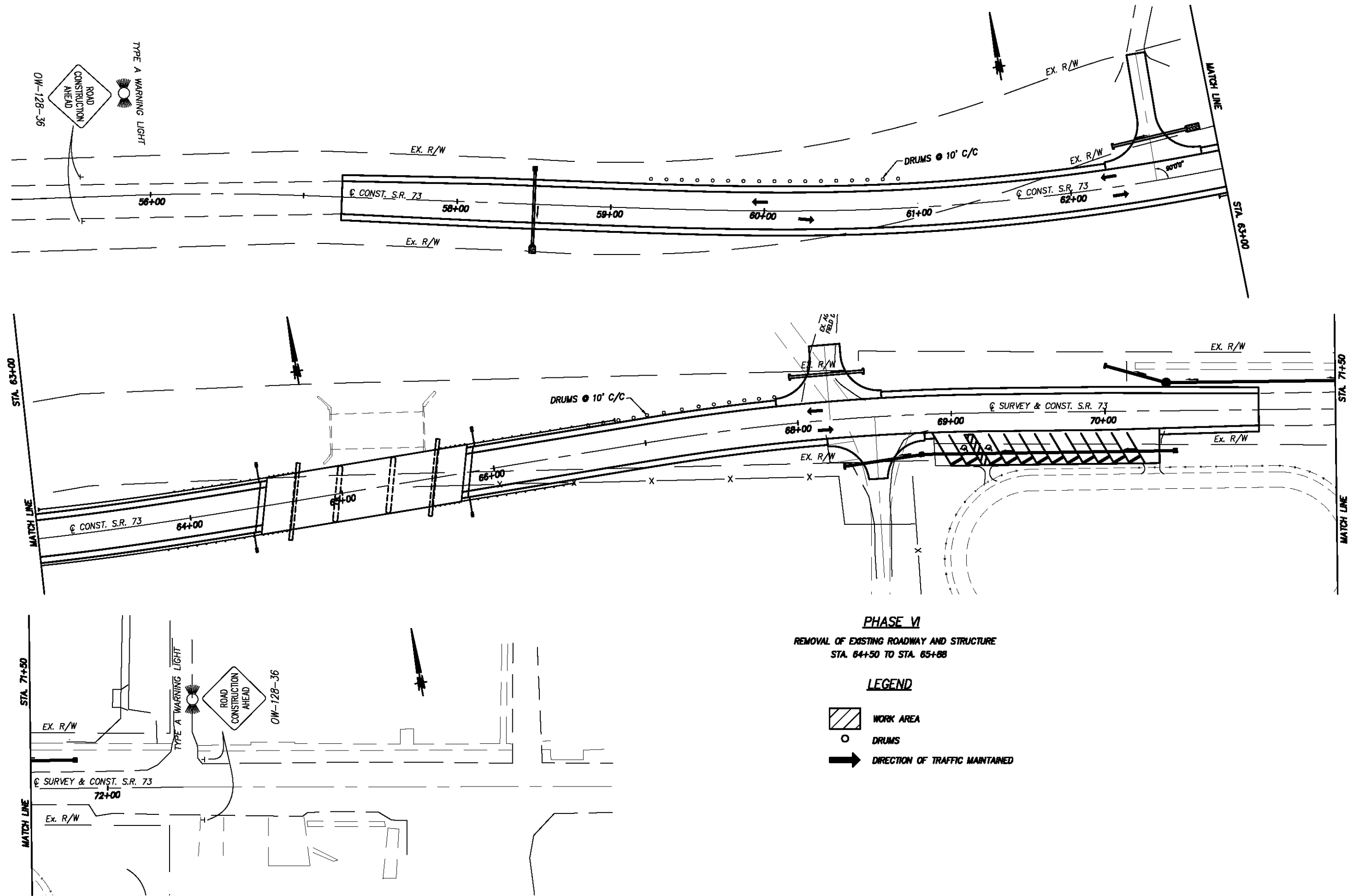


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PHASE VI
REMOVAL OF EXISTING ROADWAY AND STRUCTURE
STA. 64+50 TO STA. 65+88

LEGEND

-  WORK AREA
-  DRUMS
-  DIRECTION OF TRAFFIC MAINTAINED

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14A
47

LOCATION STATION TO STATION		ITEM 448		ITEM 448		ITEM 301		ITEM 304		ITEM 406		ITEM 204		ITEM 407	
		1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22		1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22		9" ASPHALT CONCRETE BASE, PG64-22		6" AGGREGATE BASE		PRIME COAT @ 0.4 GAL/SY		SUBGRADE COMPACTION		TACK COAT FOR INTERMEDIATE COURSE @ 0.04 GAL/SY	
S.R. 73	LENGTH		CU YD		CU YD		CU YD		CU YD		GAL		SQ YD		GAL
57+25.00 TO 58+20.00	95.00'	1.25 IN/12 x 30.67' x 95.00' /27 =	11.24	1.75 IN/12 x 30.67' x 95.00' /27 =	15.74	9 IN/12 x 31.34' x 95.00' /27 =	82.70	6 IN/12 x 32.84' x 95.00' /27 =	57.77	0.40 x 32.84' x 95.00' /9 =	138.66	33.67' x 95.00' /9 =	355.41	0.04 x 30.67' x 95.00' /9 =	12.95
58+20.00 TO 58+32.10	12.10'	1.25 IN/12 x 32.00' x 12.10' /27 =	1.48	1.75 IN/12 x 32.00' x 12.10' /27 =	2.09	9 IN/12 x 32.67' x 12.10' /27 =	10.98	6 IN/12 x 34.17' x 12.10' /27 =	7.66	0.40 x 34.17' x 12.10' /9 =	18.38	35.00' x 12.10' /9 =	47.06	0.04 x 32.00' x 12.10' /9 =	1.72
58+32.10 TO 64+48.35	616.25'	1.25 IN/12 x 32.00' x 616.25' /27 =	76.08	1.75 IN/12 x 32.00' x 616.25' /27 =	106.51	9 IN/12 x 32.67' x 616.25' /27 =	559.25	6 IN/12 x 34.17' x 616.25' /27 =	389.95	0.40 x 34.17' x 616.25' /9 =	935.88	35.00' x 616.25' /9 =	2396.53	0.04 x 32.00' x 616.25' /9 =	87.65
64+48.35 TO 64+68.35(A)	20.00'							6 IN/12 x 38.00' x 20.00' /27 =	14.07			39.00' x 20.00' /9 =	86.67		
65+60.65 TO 65+80.65(A)	20.00'							6 IN/12 x 38.00' x 20.00' /27 =	14.07			39.00' x 20.00' /9 =	86.67		
65+80.65 TO 68+82.00	401.35'	1.25 IN/12 x 32.00' x 401.35' /27 =	49.55	1.75 IN/12 x 32.00' x 401.35' /27 =	69.37	9 IN/12 x 32.67' x 401.35' /27 =	364.23	6 IN/12 x 34.17' x 401.35' /27 =	253.97	0.40 x 34.17' x 401.35' /9 =	609.52	35.00' x 401.35' /9 =	1560.81	0.04 x 32.00' x 401.35' /9 =	57.08
68+82.00 TO 70+00.00	18.00'	1.25 IN/12 x 32.00' x 18.00' /27 =	2.22	1.75 IN/12 x 32.00' x 18.00' /27 =	3.11	9 IN/12 x 32.67' x 18.00' /27 =	16.34	6 IN/12 x 34.17' x 18.00' /27 =	11.39	0.40 x 34.17' x 18.00' /9 =	27.34	35.00' x 18.00' /9 =	70.00	0.04 x 32.00' x 18.00' /9 =	2.56
70+00.00 TO 71+00.00	100.00'	1.25 IN/12 x 30.40' x 100.00' /27 =	11.73	1.75 IN/12 x 30.40' x 100.00' /27 =	16.42	9 IN/12 x 31.07' x 100.00' /27 =	88.31	6 IN/12 x 32.57' x 100.00' /27 =	60.32	0.40 x 32.57' x 100.00' /9 =	144.76	33.40' x 100.00' /9 =	371.11	0.04 x 30.40' x 100.00' /9 =	13.51
DRIVES															
62+56.50	RES.							8 IN/12 x 1396 SQ.FT. (CAD) /27 =	34.47			1638 SQ.FT. (CAD) /9 =	181.78		
68+21.10	RES.							8 IN/12 x 1240 SQ.FT. (CAD) /27 =	30.62			1374 SQ.FT. (CAD) /9 =	152.67		
68+50.10	RES.	1.25 IN/12 x 875 SQ.FT. (CAD) /27 =	3.38	1.75 IN/12 x 875 SQ.FT. (CAD) /27 =	4.73			6 IN/12 x 901 SQ.FT. (CAD) /27 =	16.69	0.40 x 901 SQ.FT. (CAD) /9 =	40.05	987 SQ.FT. (CAD) /9 =	109.67	0.04 x 875 SQ. FT. (CAD) /9 =	3.89
68+89 TO 70+35 (PARKING RT.)		1.25 IN/12 x 2549 SQ.FT. (CAD)/27 =	9.84	1.75 IN/12 x 2549 SQ.FT. (CAD)/27 =	13.77			6 IN/12 x 2715 SQ.FT. (CAD) /27 =	50.28	0.40 x 2715 SQ.FT. (CAD) /9 =	120.67	2755 SQ.FT. (CAD) /9 =	306.11	0.04 x 2549 SQ. FT. (CAD)/9 =	11.33
TOTAL			168 CU YD		232 CU YD		1120 CU YD		941 CU YD		2036 GAL		5612 SQ YD		191 GAL

NOTE: QUANTITIES CARRIED TO GENERAL SUMMARY

(A) APPROACH SLAB

ITEM 659 - COMMERCIAL FERTILIZER
6731 SQ. YD. OF 659 SEEDING AND MULCHING + 908 SQ. YD.
OF 671 EROSION CONTROL MAT, TYPE A= 7639 SQ. YD. TOTAL

7639 SQ. YD. x9= 68,751 SQ. FT.

(68,751 SQ. FT./ 1000 SQ. FT.) x30 LBS= 2063 LBS
2063 LBS/2000 LBS= 1.03 TON

TOTAL= 1.03 TON
QUANTITY CARRIED TO GENERAL SUMMARY

ITEM 659 - WATER
6731 SQ. YD. OF 659 SEEDING AND MULCHING + 908 SQ. YD.
OF 671 EROSION CONTROL MAT, TYPE A= 7639 SQ. YD. TOTAL

7639 SQ. YD. x9= 68,751 SQ. FT.

(68,751 SQ. FT./ 1000 SQ. FT.) x300 GAL x2= 41,251 GAL
41,251 GAL/1000= 41.2 M GAL

TOTAL= 41.2 M GAL

USE 41 M GAL
QUANTITY CARRIED TO GENERAL SUMMARY

ITEM 659 - TOPSOIL
6731 SQ. YD./1000 x 111 CU. YD. = 747 CU YD

TOTAL= 747 CU. YD.
QUANTITY CARRIED TO GENERAL SUMMARY

ITEM 659 - SOIL ANALYSIS TEST
TOTAL = 2 EACH

QUANTITY CARRIED TO GENERAL SUMMARY

ITEM 659 - LIME
6731 SQ. YD. OF 659 SEEDING AND MULCHING + 908 SQ. YD.
OF 671 EROSION CONTROL MAT, TYPE A= 7639 SQ. YD. TOTAL

7639 SQ YD SEEDING AND MULCHING x 9= 68,751 SQ FT

68,751 SQ FT/43,560 SQ FT/ACRE= 1.58 ACRE

TOTAL= 1.58 ACRE
QUANTITY CARRIED TO GENERAL SUMMARY

ITEM 659 - REPAIR SEEDING AND MULCHING
6731 TOTAL SQ. YD. x 0.05= 337 SQ. YD.

TOTAL= 337 SQ. YD.
QUANTITY CARRIED TO GENERAL SUMMARY

ITEM 659 - INTER-SEEDING
6731 TOTAL SQ. YD. x 0.05= 337 SQ. YD.

TOTAL= 337 SQ. YD.
QUANTITY CARRIED TO GENERAL SUMMARY

ITEM 646 - EDGE LINE
STA. 57+25 TO STA. 71+00
1375 FEET x 2= 2750 FEET= 0.52 MILE

TOTAL= 0.52 MILE
QUANTITY CARRIED TO GENERAL SUMMARY

ITEM 646 - CENTER LINE (DOUBLE-SOLID)
STA. 57+25 TO STA. 71+00= 1375 FEET= 0.26 MILE
TOTAL= 0.26 MILE

QUANTITY CARRIED TO GENERAL SUMMARY

ITEM 646 - PARKING LOT STALL MARKING
FOR PARKING LOT LOCATED AT:
STA. 68+90 TO STA. 70+35 RT

TOTAL= 365 FEET
QUANTITIES CARRIED TO GENERAL SUMMARY

ITEM 646 - HANDICAP SYMBOL MARKING
FOR PARKING LOT LOCATED AT:
STA. 68+90 TO STA. 70+35 RT

TOTAL= 2 EACH
QUANTITIES CARRIED TO GENERAL SUMMARY

ITEM 621 - RPM
STA. 57+25 TO STA. 71+00
1375 FEET / 80 FEET SPACING + 1= 18 EACH

TOTAL= 18 EACH
QUANTITIES CARRIED TO GENERAL SUMMARY

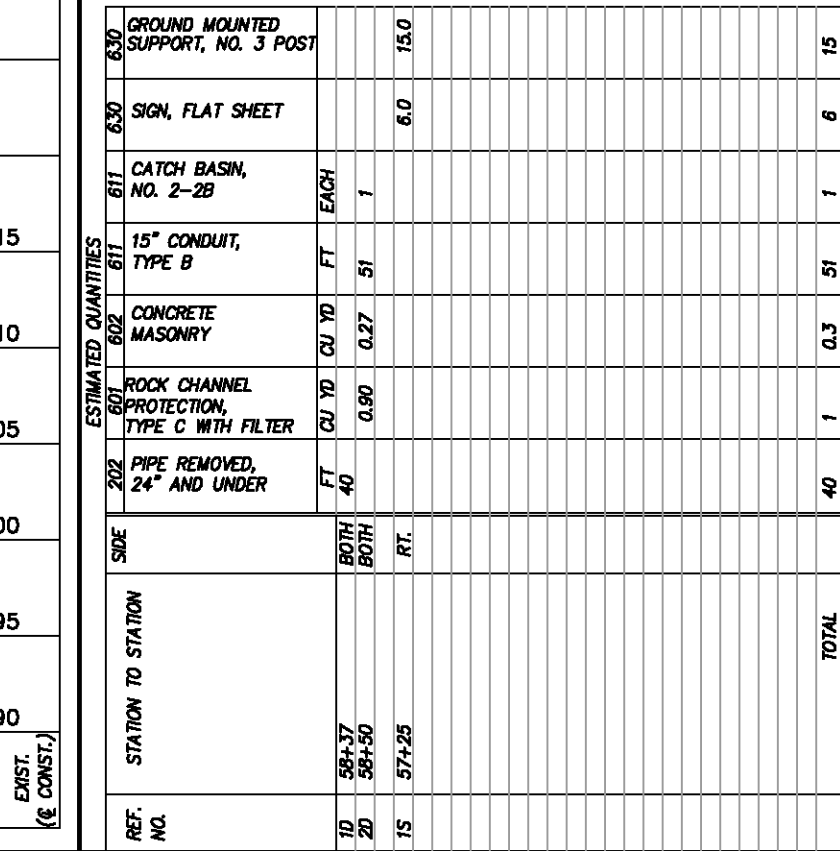
ITEM 605 - AGGREGATE DRAINS
THE APPROXIMATE AGGREGATE DRAIN LENGTHS ARE LISTED
BELOW.

57+25 LT., L= 7'	64+68 LT., L= 8'
57+50 RT., L= 8'	65+75 RT., L= 8'
57+75 LT., L= 7'	66+00 RT., L= 9'
58+00 RT., L= 9'	66+25 RT., L= 10'
58+25 LT., L= 7'	66+50 RT., L= 12'
58+50 RT., L= 8'	66+75 RT., L= 12'
62+00 LT., L= 9'	67+00 RT., L= 12'
62+25 LT., L= 11'	67+25 RT., L= 10'
62+75 LT., L= 14'	67+50 RT., L= 9'
63+00 LT., L= 16'	
63+25 LT., L= 15'	
64+06 LT., L= 19'	
64+31 LT., L= 14'	
64+56 LT., L= 12'	

TOTAL = 246 FT
QUANTITY CARRIED TO GENERAL SUMMARY



FOR PAVEMENT CALCULATIONS, SEE SHEET 15
FOR EXISTING PAVEMENT REMOVAL, SEE SHEETS 22-23
FOR EROSION CONTROL QUANTITIES, SEE SHEET 22
FOR SUPERELEVATION TABLE, SEE SHEET 17
FOR STORM SEWER DETAIL, SEE SHEET 23



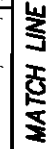
SUPERELEVATION TABLE						
REMARKS	STATION	PROFILE GRADE	LT SLOPE	LT EP ELEV	RT SLOPE	RT EP ELEV
BOP	57+00.00					
VPI	57+25.00	613.49	-0.0156	613.30	-0.0156	613.30
	57+50.00	612.83	-0.0156	612.44	-0.0156	612.44
	57+75.00	611.90	-0.0156	611.71	-0.0156	611.71
	58+00.00	611.30	-0.0156	611.11	-0.0156	611.11
	58+25.00	610.83	-0.0156	610.64	-0.0156	610.64
NORMAL	58+32.10	610.73	-0.0156	610.54	-0.0156	610.54
	58+50.00	610.48	-0.0156	610.29	-0.0085	610.38
TS	58+71.60	610.29	-0.0156	610.10	0.0000	610.29
VPT	58+75.00	610.26	-0.0156	610.07	0.0013	610.28
	59+00.00	610.11	-0.0156	609.92	0.0112	610.24
NO CROWN	59+11.10	610.04	-0.0156	609.85	0.0158	610.23
	59+25.00	609.96	-0.0211	609.71	0.0211	610.21
	59+50.00	609.80	-0.0310	609.43	0.0310	610.17
	59+75.00	609.64	-0.0408	609.15	0.0408	610.13
	60+00.00	609.49	-0.0507	608.88	0.0507	610.10
	60+25.00	609.34	-0.0606	608.61	0.0606	610.07
	60+50.00	609.18	-0.0705	608.33	0.0705	610.03
SC	60+56.80	609.14	-0.0730	608.26	0.0730	610.02
	60+75.00	609.02	-0.0730	608.14	0.0730	609.90
	61+00.00	608.87	-0.0730	607.99	0.0730	609.75
	61+25.00	608.74	-0.0730	607.86	0.0730	609.62
VPC	61+50.00	608.68	-0.0730	607.80	0.0730	609.56
	61+75.00	608.67	-0.0730	607.79	0.0730	609.55
LP	61+87.10	608.69	-0.0730	607.81	0.0730	609.57
	62+00.00	608.72	-0.0730	607.84	0.0730	609.60
	62+25.00	608.83	-0.0730	607.95	0.0730	609.71
	62+50.00	608.99	-0.0730	608.11	0.0730	609.87
	62+75.00	609.22	-0.0730	608.34	0.0730	610.10
CS	62+85.88	609.34	-0.0730	608.48	0.0730	610.22
	63+00.00	609.50	-0.0674	608.69	0.0674	610.31
	63+25.00	609.81	-0.0575	609.12	0.0575	610.50
VPT	63+50.00	610.13	-0.0477	609.58	0.0477	610.70
	63+75.00	610.44	-0.0378	609.99	0.0378	610.89
	64+00.00	610.75	-0.0279	610.42	0.0279	611.09
	64+25.00	611.02	-0.0180	610.80	0.0180	611.24
NO CROWN	64+31.16	611.07	-0.0156	610.88	0.0156	611.26
	64+50.00	611.21	-0.0156	611.02	0.0082	611.31
ST	64+70.66	611.29	-0.0156	611.10	0.0000	611.29
	64+75.00	611.31	-0.0156	611.12	-0.0017	611.29
	65+00.00	611.34	-0.0156	611.15	-0.0116	611.20
NORMAL	65+10.18	611.32	-0.0156	611.13	-0.0156	611.13



CALC.	JCM
SF.	
DATE:	2/20/00
CHRG.	GED
SF.	
DATE:	4/01/01

**PLAN AND PROFILE
STATION 63+00 TO STATION 67+00**

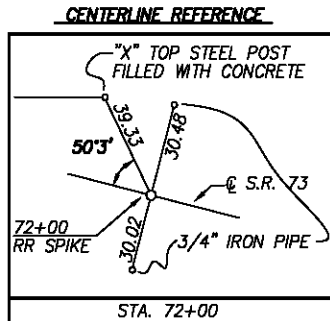
VACANT RESIDENTIAL



	EXIST. CONST. (€ CONST.)	PROF. CONST. (€ CONST.)
0	90	15
1	95	10
2	00	05
3		
4		
5		
6		
7		
8		
9		
10		

BENCHMARK #3
"□" CUT ON EAST END NORTH SAFETY CURB OF EXISTING BRIDGE
STA. 65+62.90
ELEV. 611.401
43.67' L.T.

	SCI-73-1.10	PLAN AND PROFILE STATION 67+00 TO STATION
---	--------------------	--



40'
20'
0'

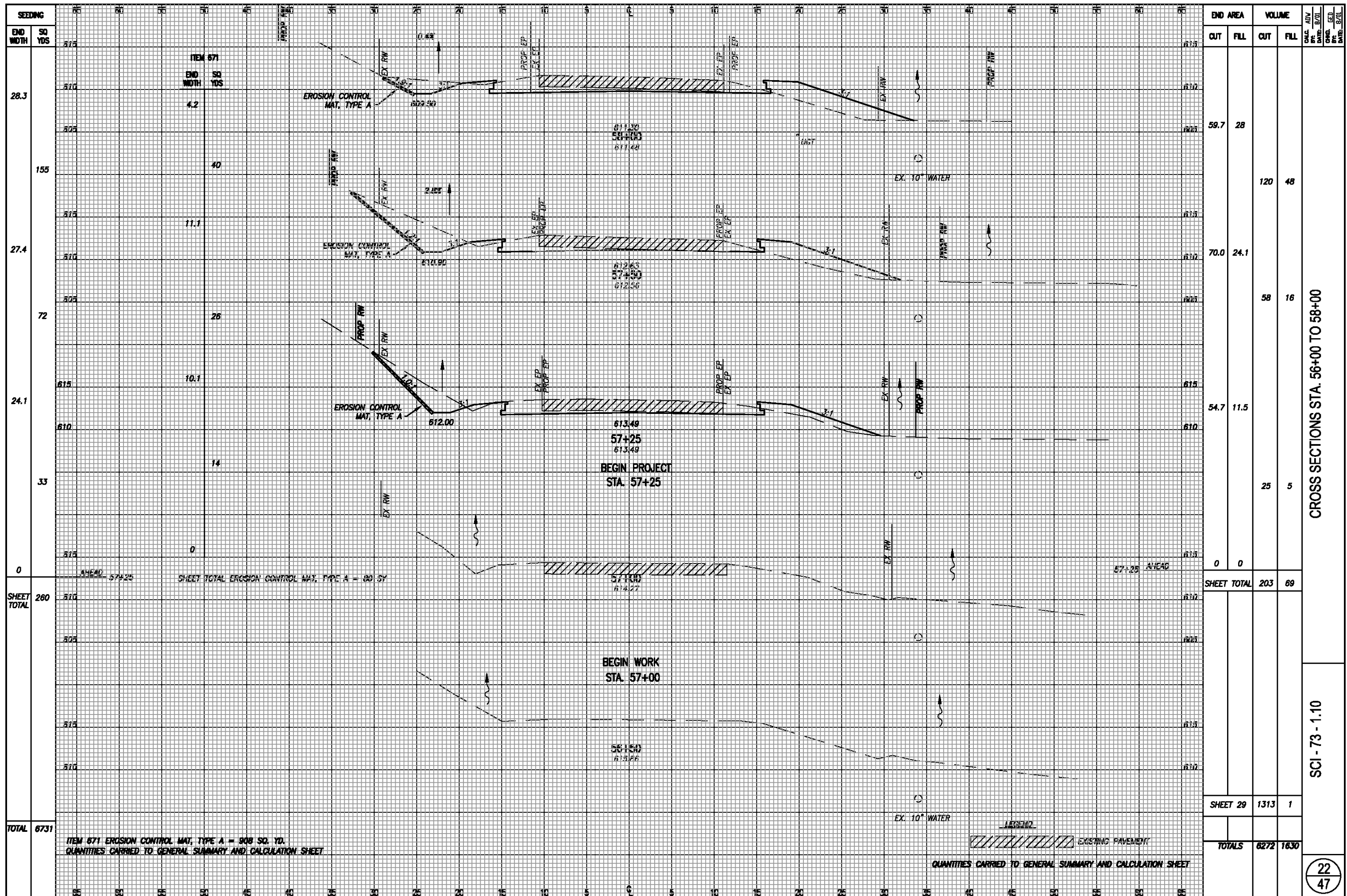
HORIZONTAL
SCALE IN FEET

PC 1+00.00
PT 1+00.00
DATE 7/20/01

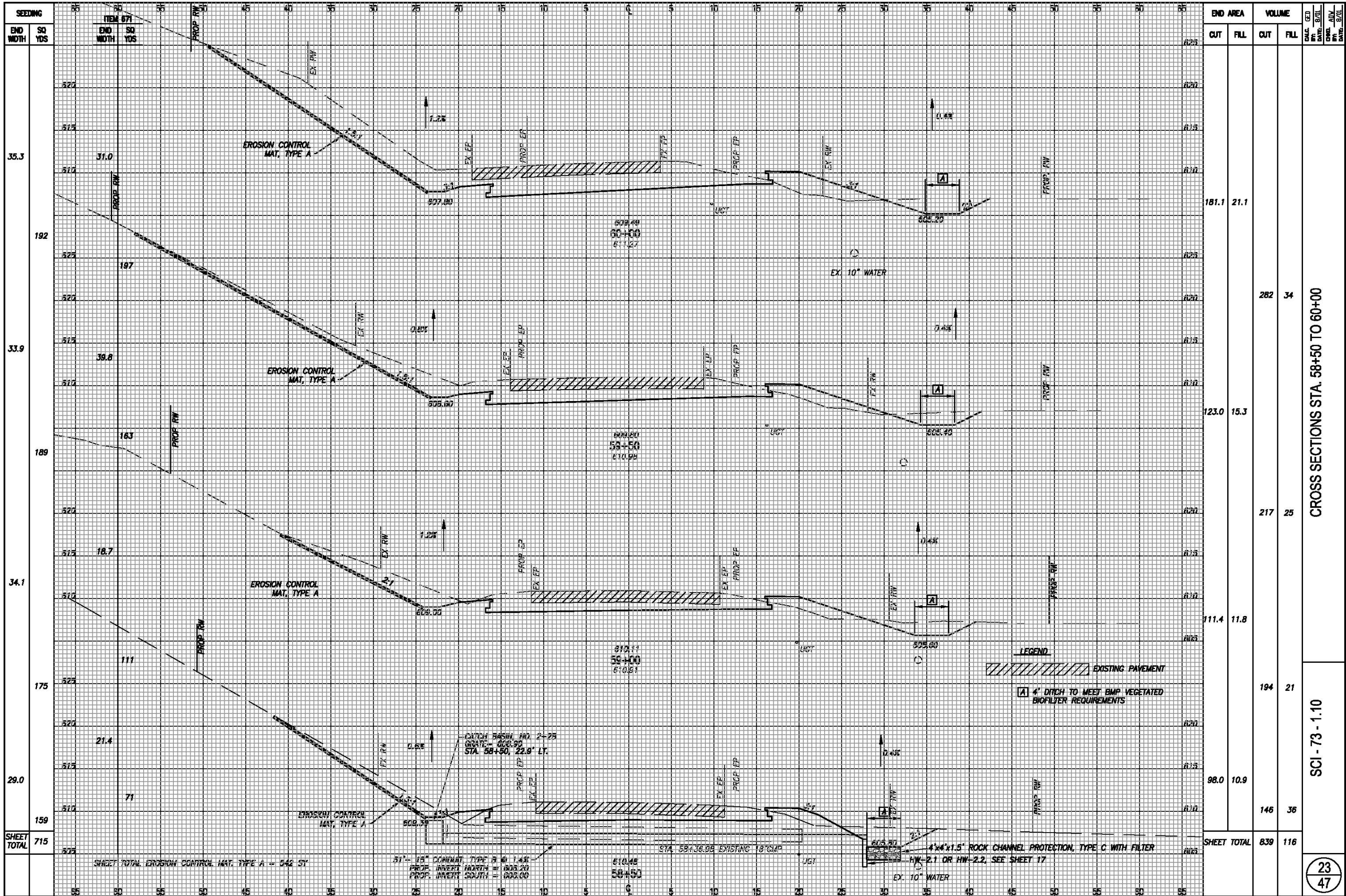
END
PC 1+00.00
PT 1+00.00
DATE 7/20/01

SCI-73-1.10

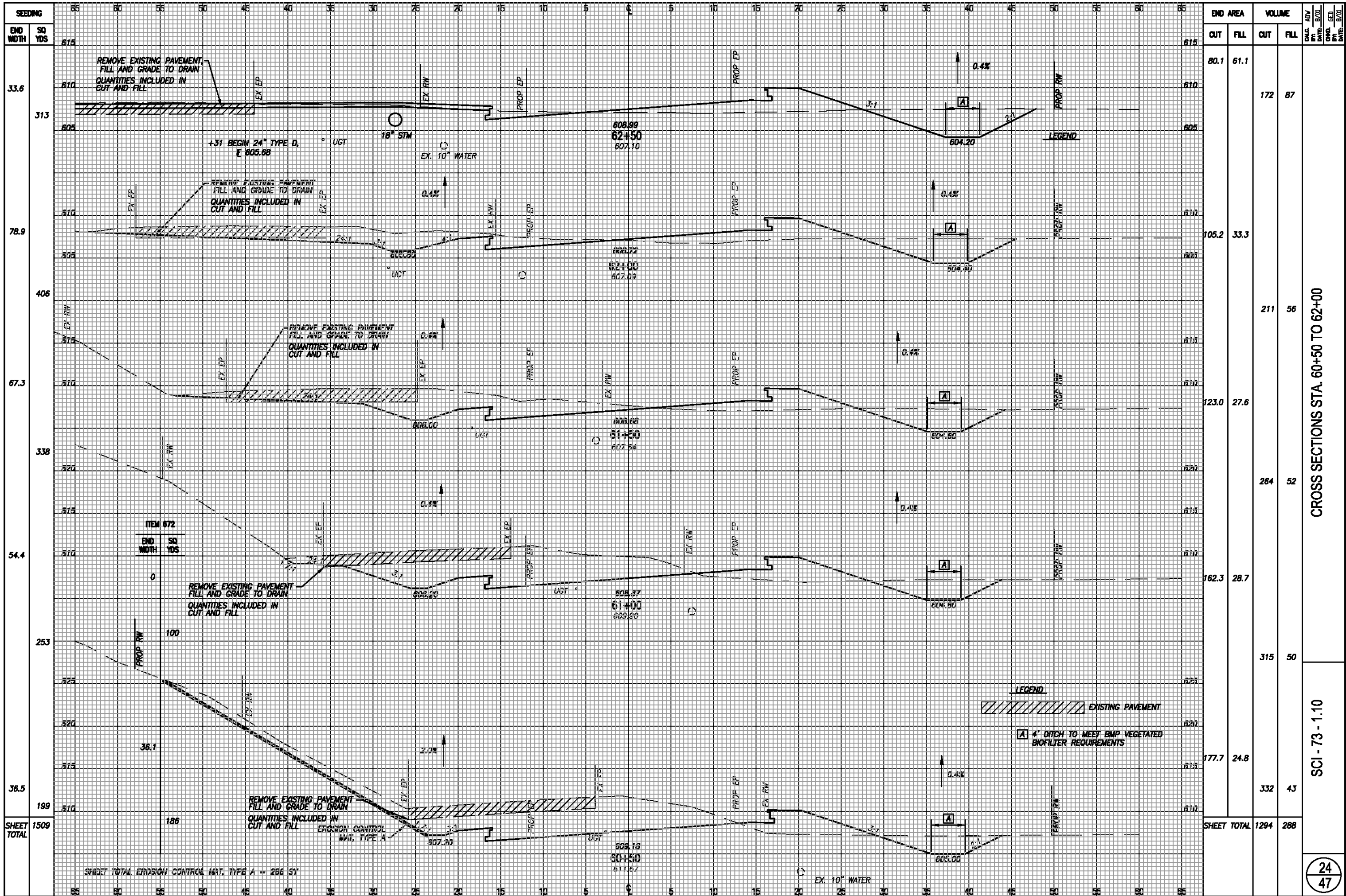
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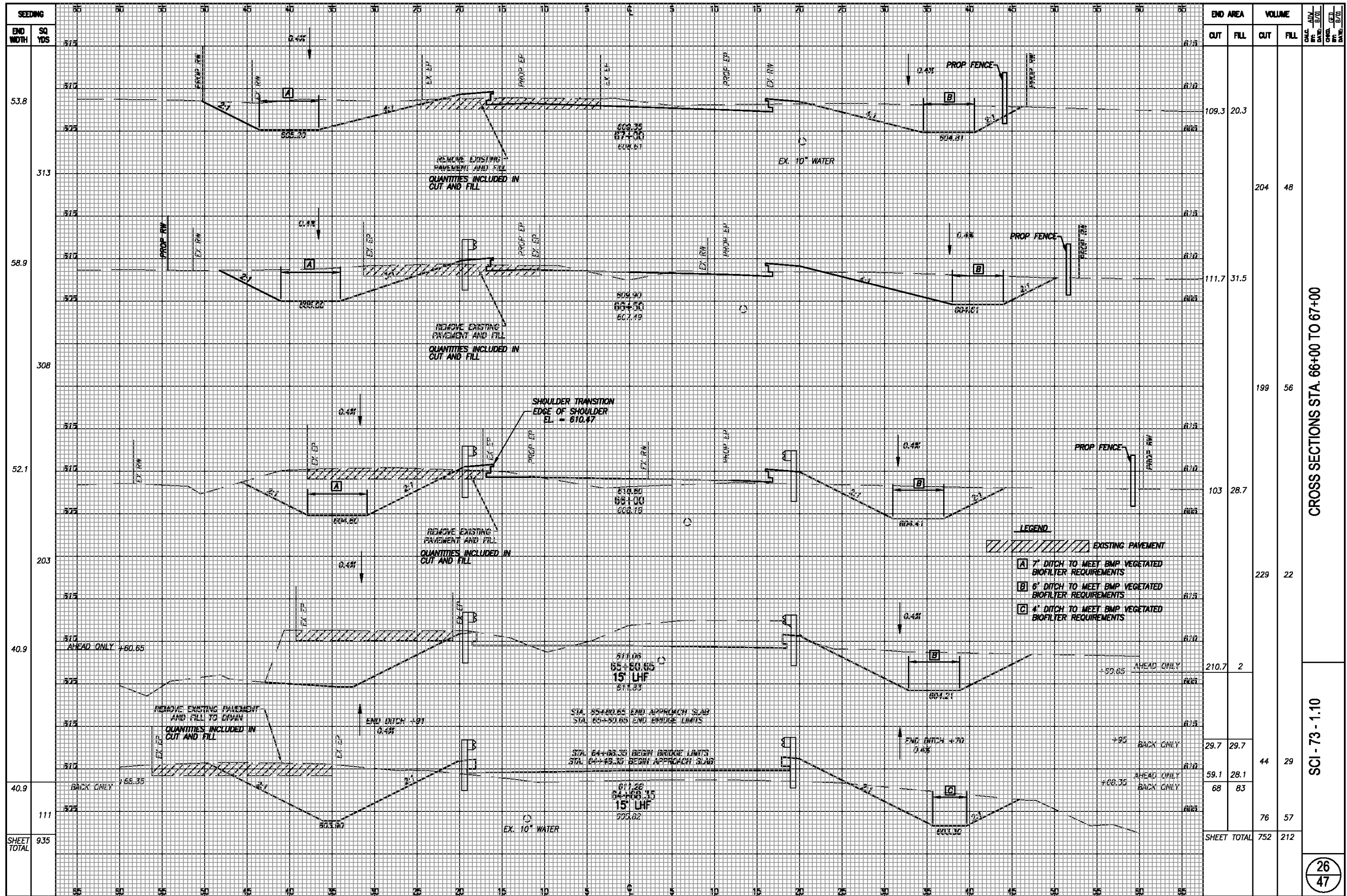


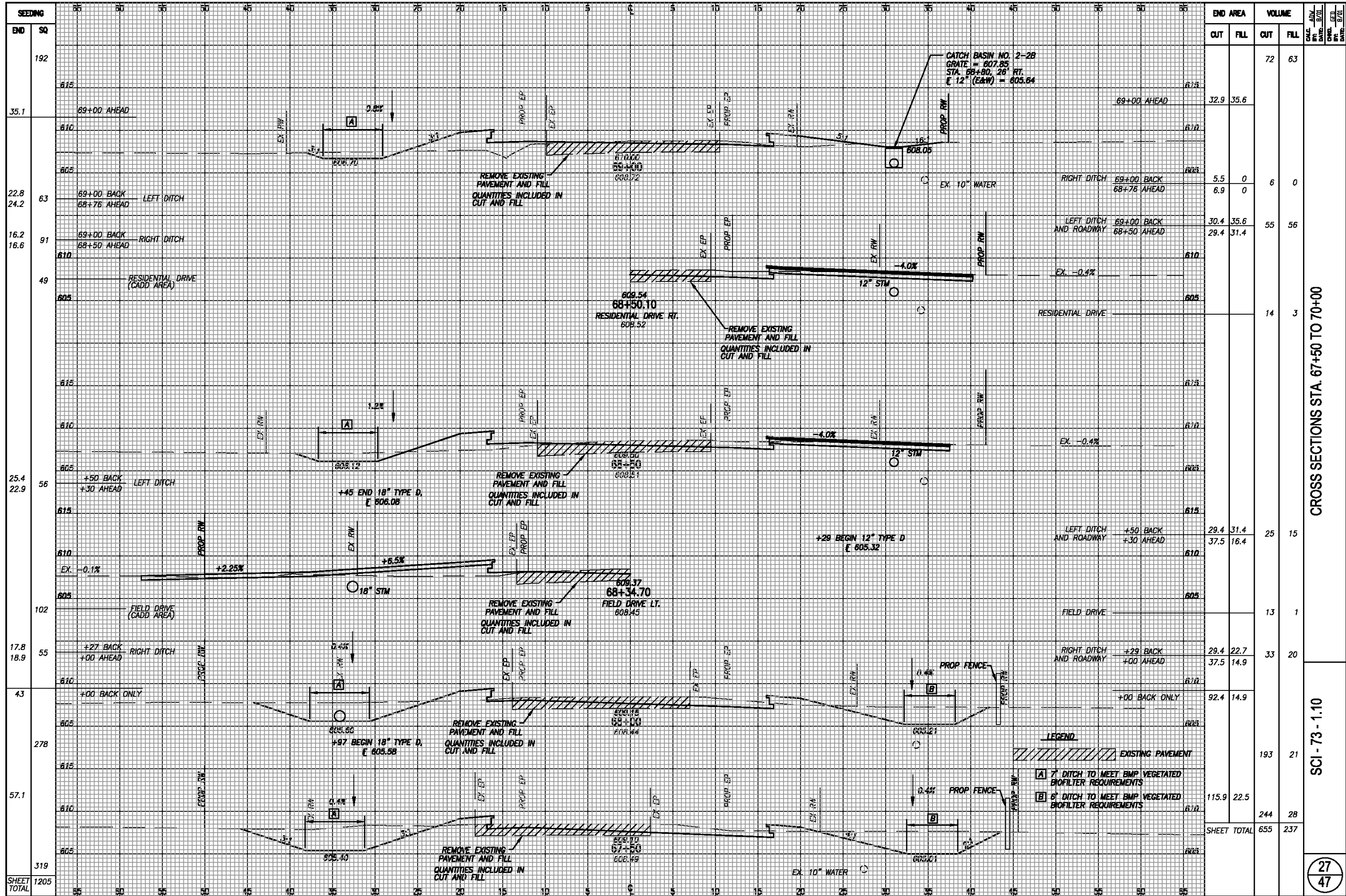
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May 19, 2014, 9:27am



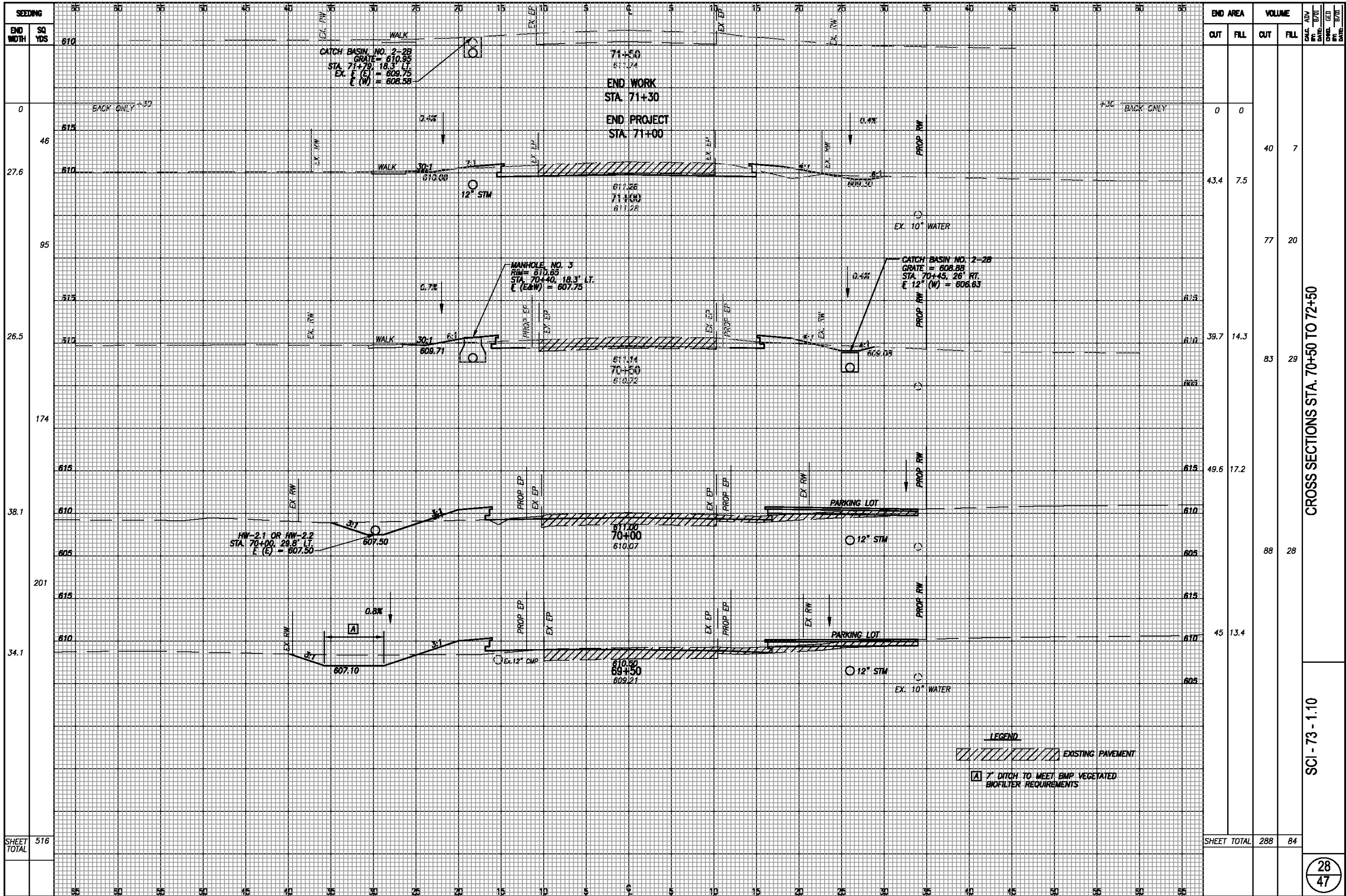
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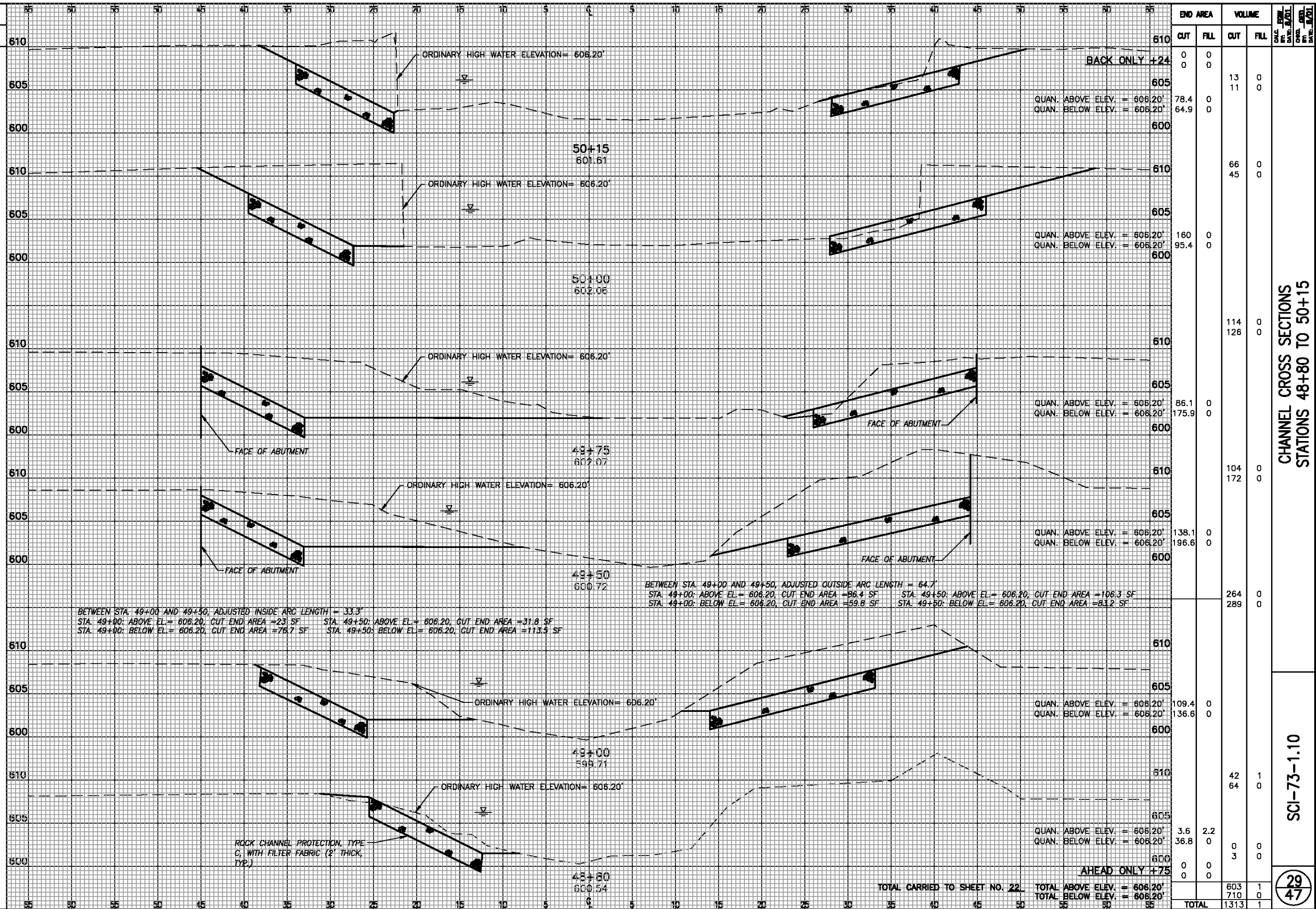




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May 20, 2014, 9:51am



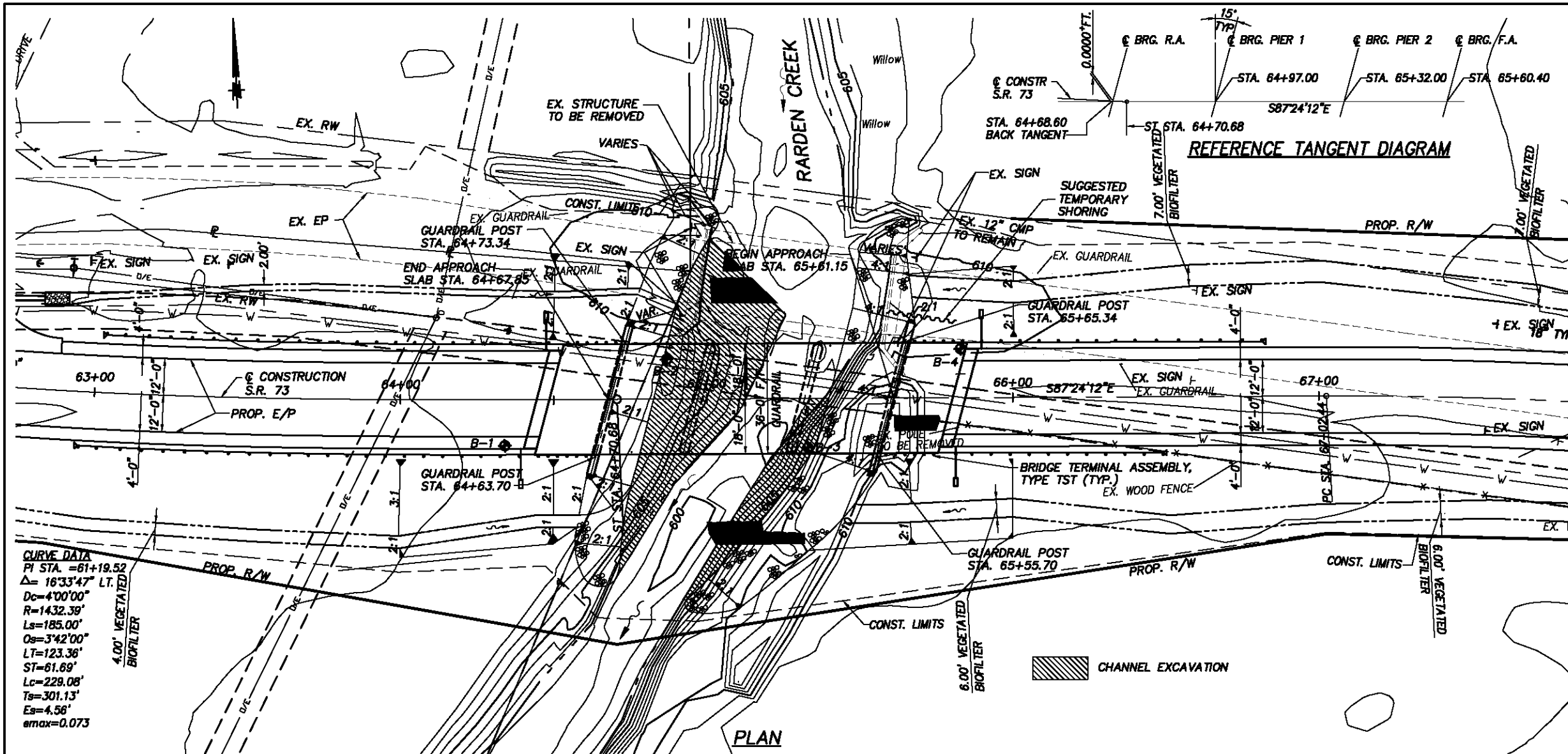
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May 19, 2014, 9:35am



CHANNEL CROSS SECTIONS
STATIONS 48+80 TO 50+15

SCI-73-1.10

29
47



EARTHWORK LIMITS SHOWN ARE APPROXIMATE.
 ACTUAL SLOPES SHALL CONFORM TO PLAN
 CROSS SECTIONS.

- LEGEND**
 ABUT. = ABUTMENT
 C/C = CENTER TO CENTER
 E/P = EDGE OF PAVEMENT
 E/S = EDGE OF SHOULDER
 EX. = EXISTING
 EXP. = EXPANSION
 F/F = FACE TO FACE
 FTG. = FOOTING
 FWD. = FORWARD
 G = GAS
 H.W. = HIGH WATER ELEVATION AT BRIDGE
 PROP. = PROPOSED
 W = WATER
 BOREING LOCATION
 * ELEVATIONS INCLUDE BACKWATER

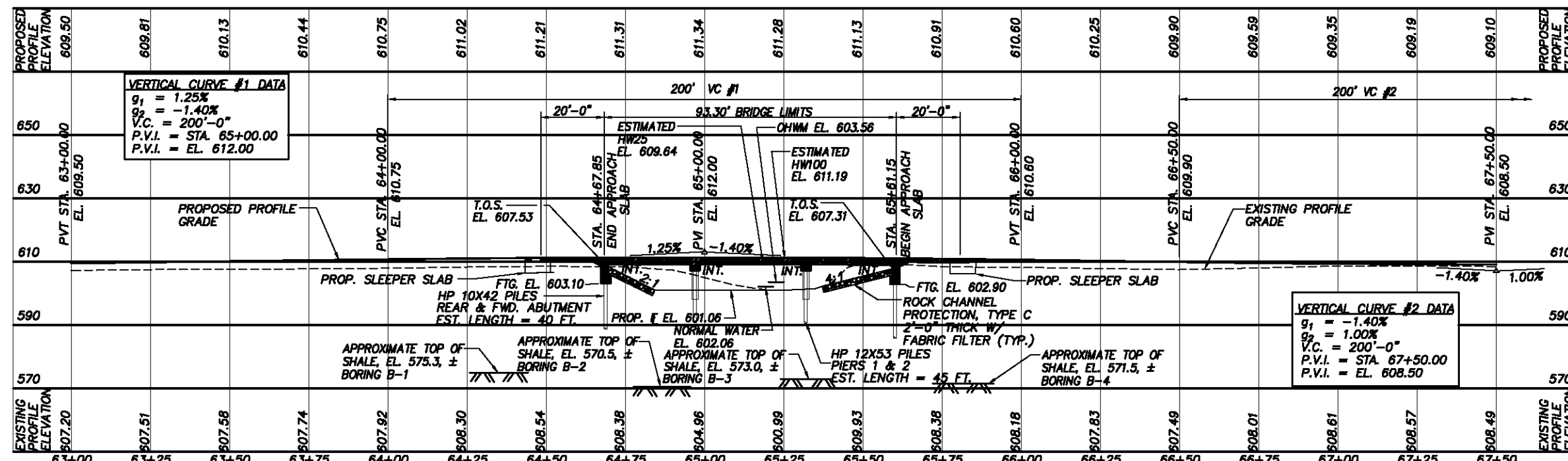
BENCHMARK
 BENCHMARK #2
 RR SPIKE SOUTH SIDE 36" SYCAMORE NORTH
 SIDE OF S.R. 73. STA. 62+34.79, 98.09' LT
 ELEV. 611.260
 BENCHMARK #3
 "C" CUT ON EAST END NORTH SAFETY CURB
 OF EXISTING BRIDGE. STA. 65+62.90, 43.67' LT
 ELEV. 611.401

TRAFFIC DATA
 CURRENT ADT (2014) = 2300
 CURRENT ADTT (2014) = 370
 DESIGN ADT (2034) = 3500
 DESIGN ADTT (2034) = 560

HYDRAULIC DATA
 DRAINAGE AREA: 18.11 SQ. MI.
 DESIGN DISCHARGES Q25: 2928 cfs
 Q100: 4031 cfs
 DESIGN VELOCITIES
 V25: 6.93 ft/s
 V100: 5.50 ft/s
 * DESIGN HIGH WATER HW25: EL. = 609.64 ft.
 ELEVATIONS HW100: EL. = 611.19 ft.
 CLEARANCE ABOVE DESIGN HW25 = -0.33 ft.
 CLEARANCE ABOVE HW100 = -1.88 ft.

EXISTING STRUCTURE
 TYPE: SINGLE SPAN CONCRETE THROUGH
 GIRDER ON CONCRETE ABUTMENTS
 SPAN: 60'-0" ± F/F ABUTMENTS
 ROADWAY: 23'-0" ± TOE/TOE OF CURBS
 SIDEWALK: NONE
 SKEW: NONE
 LOADING: UNKNOWN
 WEARING SURFACE: ASPHALT CONCRETE
 DECK: MONOLITHIC CONCRETE
 APPROACH SLAB: NONE
 DATE BUILT: 1930
 STRUCTURE FILE NUMBER: 7302193

PROPOSED STRUCTURE
 TYPE: THREE SPAN REINFORCED CONCRETE
 CONTINUOUS SLAB ON CAPPED PILE
 PIERS AND ABUTMENTS
 SPAN: 28'-4 3/4", 35'-0", 28'-4 3/4"
 C/C BEARINGS
 ROADWAY: 36'-0" F/F GUARDRAIL
 SKEW: 15° LEFT FORWARD
 LOADING: HS 25 AND ALTERNATE MILITARY
 LOADING
 WEARING SURFACE: MONOLITHIC CONCRETE
 APPROACH SLABS: AS-1-B1 (20'-0" LONG)
 ALIGNMENT: SPIRAL REAR TANGENT FORWARD
 CROWN: VARIES, SEE DETAIL SHEET 2/11
 QUADRANGLE: RARDEN
 LATITUDE: 38°55'24"
 LONGITUDE: 83°14'54"



STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS
REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-81	REVISED	1-18-13
CPA-1-08	DATED	7-18-08
CPP-1-08	DATED	7-19-13
CS-1-08	DATED	7-18-08
DS-1-92	REVISED	7-18-03
TST-1-99	REVISED	1-17-14
DM-1.1	DATED	1-18-13

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 5th EDITION, INCLUDING THE 2010 INTERIM SPECIFICATIONS, AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

OPERATIONAL IMPORTANCE: A LOAD MODIFIER OF 1 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING: HL93
FUTURE WEARING SURFACE (FWS) OF 80 LBS/FT².

DESIGN DATA:
CONCRETE, CLASS QC2 -
COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE, CLASS QC1 -
COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

DECK PROTECTION METHOD:
EPOXY COATED REINFORCING STEEL
2 1/2" CONCRETE COVER
STEEL DRIP STRIP

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

ITEM 202. STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

REMOVAL OF EXISTING STRUCTURE: WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE REMOVED IN STAGES UPON RECEIVING PERMISSION FROM THE ENGINEER. REMOVE THE ENTIRE SUPERSTRUCTURE. REMOVE THE REAR ABUTMENT AND THE PIER 2'-0" BELOW THE FLOW LINE. REMOVE THE FORWARD ABUTMENT 2'-0" BELOW THE SUBGRADE.

PROTECTION OF TRAFFIC: PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT HIS PLANS FOR THE PROTECTION OF VEHICULAR AND PEDESTRIAN TRAFFIC ADJACENT TO THE STRUCTURE TO THE DIRECTOR FOR APPROVAL. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION.

PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE BID, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF 202, AND TO THE SATISFACTION OF THE ENGINEER.

ITEM 503 UNCLASSIFIED EXCAVATION, AS PER PLAN:
UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE LSM.

PILES TO BEDROCK: DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED BY PENETRATING WEAK BEDROCK FOR SEVERAL INCHES TO A MINIMUM RESISTANCE OF 20 BLOWS PER INCH OR BY CONTACTING STRONG BEDROCK AND THE PILE RECEIVING AT LEAST 20 BLOWS. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL. INSTEAD OF DRIVING TO REFUSAL, THE CONTRACTOR MAY PERFORM DYNAMIC LOAD TESTING ACCORDING TO C&MS 523 TO ESTABLISH A DRIVING CRITERIA FOR EACH PILE TYPE AND CAPACITY. ESTABLISH THE DRIVING CRITERIA TO ACHIEVE AN ULTIMATE BEARING VALUE THAT IS 1.5 TIMES THE TOTAL FACTORED LOAD GIVEN BELOW FOR PILES. PAYMENT FOR DYNAMIC LOAD TESTING PERFORMED AT THE CONTRACTOR'S OPTION IS INCLUDED IN THE UNIT PRICE PAY ITEM FOR PILES DRIVEN.

THE TOTAL FACTORED LOAD IS 100 KIPS PER PILE FOR THE HP10x42 ABUTMENT PILES.
THE TOTAL FACTORED LOAD IS 230 KIPS PER PILE FOR THE HP12x53 PIER PILES.

REAR AND FORWARD ABUTMENT PILES:
16 PILES 40 FEET LONG, ORDER LENGTH

PIER 1 AND PIER 2 PILES:
12 PILES 45 FEET LONG, ORDER LENGTH

UTILITY LINES: ALL EXPENSE INVOLVED IN RELOCATION OF THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITIES. THE CONTRACTOR AND UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

PILE SPLICES: IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN C&MS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPICER. FURNISH SPICERS FROM THE FOLLOWING MANUFACTURER:

ITEM SPECIAL - PILE ENCASEMENT:
ENCASE ALL STEEL H-PILES FOR THE CAPPED PILE PIERS IN CLASS QC1 CONCRETE. PROVIDE A CONCRETE SLUMP BETWEEN 6 TO 8 INCHES WITH THE USE OF A SUPERPLASTICIZER. PLACE THE CONCRETE WITHIN A FORM THAT CONSISTS OF POLYETHYLENE PIPE (707.33), OR PVC PIPE (707.42). THE ENCASEMENT SHALL EXTEND FROM 3 FEET BELOW THE FINISHED GROUND SURFACE UP TO THE CONCRETE PIER CAP. POSITION THE PIPE SO THAT AT LEAST 3 INCHES OF CONCRETE COVER IS PROVIDED AROUND THE EXTERIOR OF THE PILE.

IN LIEU OF ENCASING THE PILE IN CONCRETE, GALVANIZE THE PILES ACCORDING TO 711.02. THE GALVANIZING SHALL BE CONTINUOUS FROM A MINIMUM OF 3 FEET BELOW THE FINISHED GROUND SURFACE UP TO THE CONCRETE PIER CAP. THE GALVANIZED COATING THICKNESS SHALL BE A MINIMUM OF 4 MILS. REPAIR ALL GOUGES, SCRAPES, SCRATCHES OR OTHER SURFACE IMPERFECTIONS CAUSED BY THE HANDLING OR THE DRIVING OF THE PILE TO THE SATISFACTION OF THE ENGINEER.

THE DEPARTMENT WILL MEASURE PILE ENCASEMENT BY THE NUMBER OF FEET. THE DEPARTMENT WILL DETERMINE THE SUM AS THE LENGTH MEASURED ALONG THE AXIS OF EACH PILE FROM THE BOTTOM OF THE ENCASEMENT TO THE BOTTOM OF THE PIER CAP. THE DEPARTMENT WILL NOT PAY FOR GALVANIZING PROVIDED BEYOND THE PROJECT REQUIREMENTS. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM - SPECIAL, PILE ENCASEMENT.

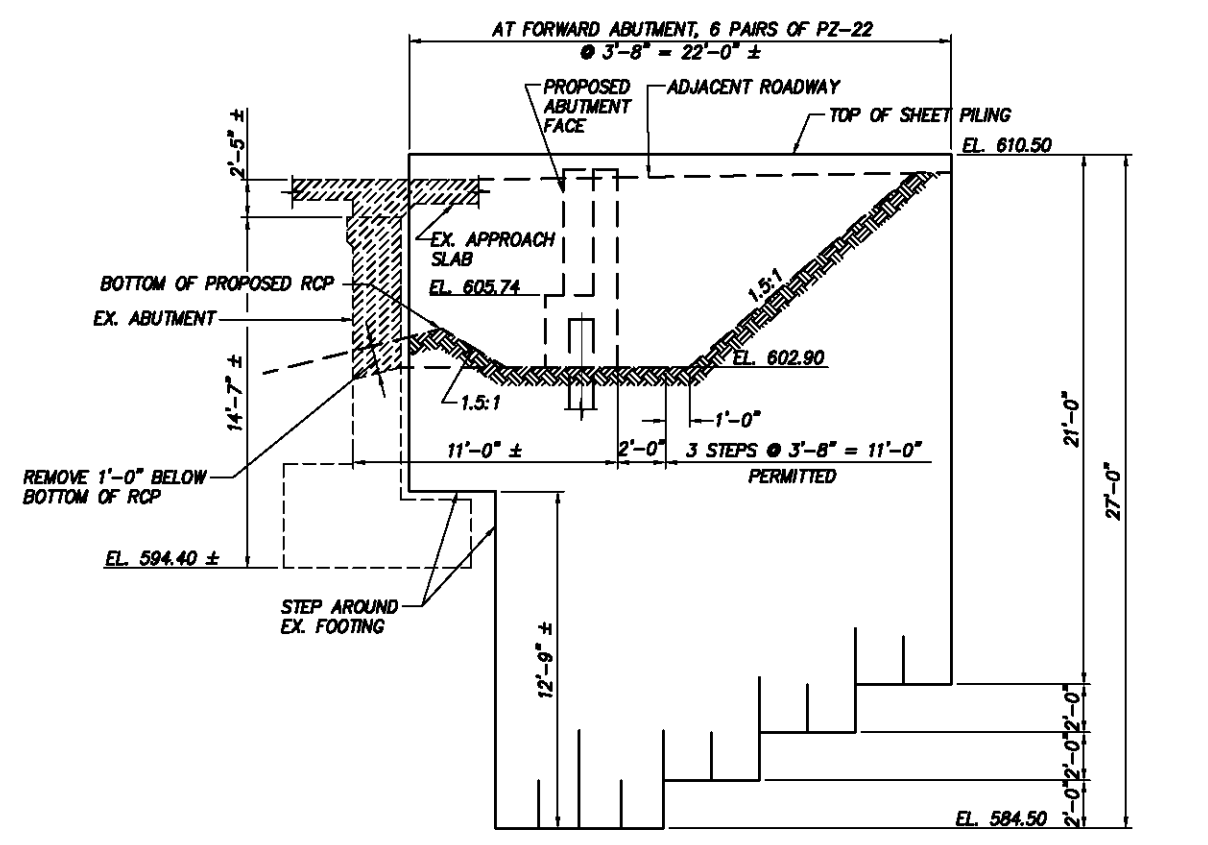
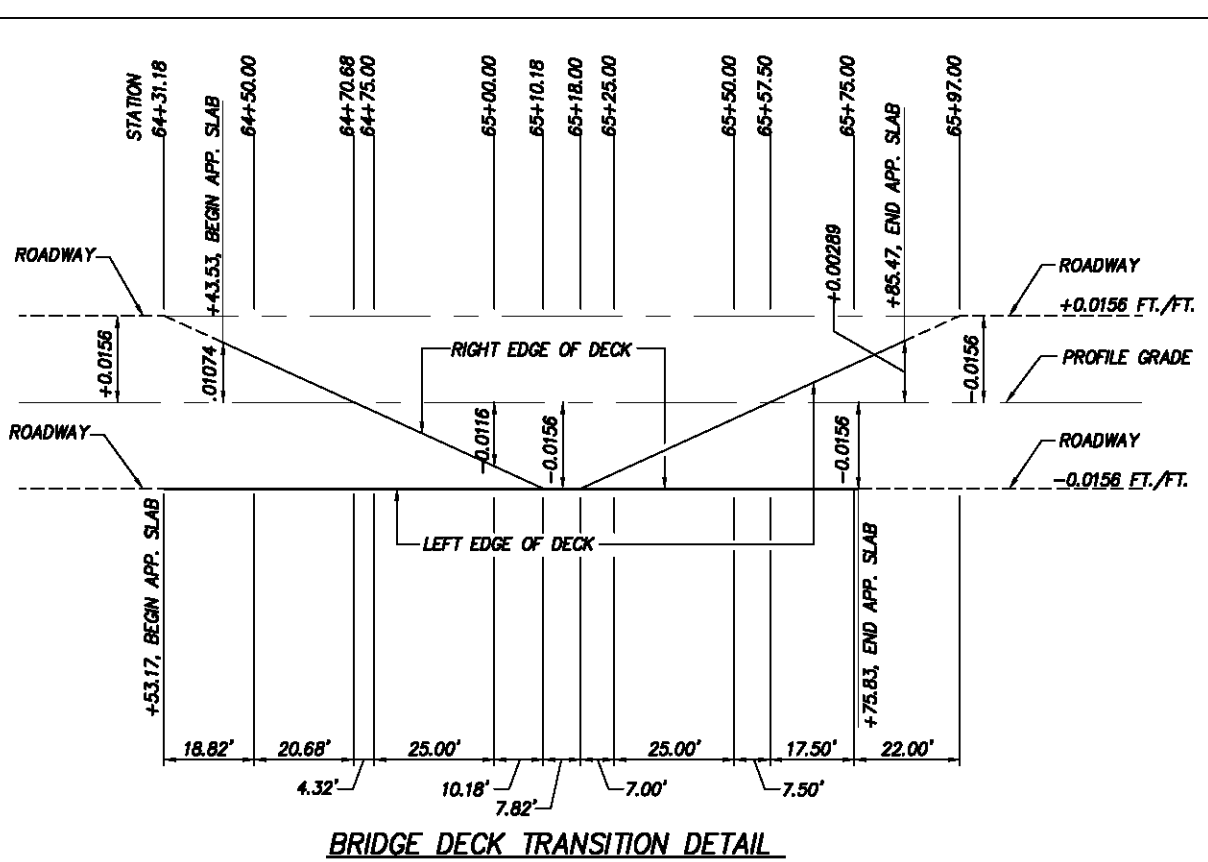
ITEM 503. COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN:
THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

ITEM 613. LOW STRENGTH MORTAR BACKFILL, AS PER PLAN:
THE BACKFILL MATERIAL BEHIND THE ABUTMENTS AND UNDER THE APPROACH SLABS SHALL BE LOW STRENGTH MORTAR BACKFILL AS DETAILED ON SHEET 6/11. LSM, TYPE 1 SHALL CONFORM TO C&MS 613 AND BE PLACED WITHIN THE LIMITS OF THE APPROACH SLABS AND IT MAY ALSO BE USED TO CONSTRUCT THE SLOPES IN THIS SAME AREA AS LONG AS IT IS COVERED WITH ONE FOOT OF SOIL TO MATCH THE EXISTING GRADE. THE AREA FOR THE POROUS BACKFILL WITH FILTER FABRIC SHALL BE FORMED UP PRIOR TO THE PLACEMENT OF THE LSM, TYPE 1 BACKFILL AND THE PLACEMENT OF THE FILTER FABRIC AND POROUS BACKFILL SHALL BE PLACED AFTER LSM HAS CURED AND THE FORMS HAVE BEEN REMOVED.

PAYMENT FOR ALL EQUIPMENT, MATERIALS, AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE CUBIC YARD CONTRACT PRICE FOR ITEM 613, LOW STRENGTH MORTAR BACKFILL, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

SUGGESTED TEMPORARY SHORING NOTES AND
CONSTRUCTION PROCEDURES

1. INSTALL THE PCB AS SHOWN ON SHEET 8/47, PHASE 1.
2. SAW CUT THE EXISTING APPROACH SLAB AT THE FORWARD ABUTMENT ALONG A LINE 1'-0" SOUTH OF THE PCB.
3. INSTALL THE SHEET PILING AS SHOWN ON TYPICAL SECTION. THE SHEET PILING LAYOUT IS BASED UPON A PZ-22 SECTION. THE MINIMUM SECTION MODULUS IS 18.1 IN 3/FT. EQUIVALENT SHEET PILING SECTIONS ARE PERMISSIBLE UPON APPROVAL. THE SHEET PILING SHALL BE INSTALLED DURING MAINTENANCE OF TRAFFIC, PHASE 1, SHEET 8/47 AND REMOVED IN MAINTENANCE OF TRAFFIC, PHASE IV, SHEET 11/47.
4. REMOVE PORTIONS OF THE SOUTHEAST WINGWALL TO 2'-0" BELOW THE PROPOSED SUBGRADE EMBANKMENT. REMOVE THE ENTIRE END OF THIS WINGWALL WHICH INTERFERES WITH THE PROPOSED FORWARD ABUTMENT.
5. CONSTRUCT THE EMBANKMENT AND EXCAVATE ACCORDING TO THE NOTES ON THIS SHEET AND INSTALL TEMPORARY TRENCH SHORING AS REQUIRED. BUILD THE REAR AND FORWARD ABUTMENT.
6. PLACE THE ROCK CHANNEL PROTECTION AND BUILD THE PIERS AND SUPERSTRUCTURE. REMOVE THE TEMPORARY SHEET PILING IN MAINTENANCE OF TRAFFIC, PHASE IV.
7. AFTER REMOVING THE EXISTING BRIDGE, PLACE THE REMAINING ROCK CHANNEL PROTECTION.



SUGGESTED TEMPORARY SHORING DETAIL-ELEVATION
NOT TO SCALE

REFER TO SITE PLAN FOR LOCATION OF TEMPORARY SHORING.
REFER TO TEMPORARY SHORING NOTES 1-7 THIS SHEET.

DESIGN AGENCY
ME
COMPANIES

DATE
08/12

REVISION
JDH

STRUCTURE FILE NUMBER
7302207

GENERAL NOTES
BRIDGE NO. SCI-73-0123
OVER RARDEN CREEK

SCI-73-01.10
PID 13234

2/11

32
47

D:\pwworking\14300-153\Bridges\90264\QUANT.dwg
June 26, 2014, 10:10am

ESTIMATED QUANTITIES									
					CALC. BY: SRB/ZNG DATE: 6-28-12 CHKD. BY: AJS DATE: 7-26-12				
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENT	PIER	SUPERSTR.	APPROACH SLAB	SHEET REF.
202	11003	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					LUMP 2/11
503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN					LUMP 2/11
503	21101	63	CU YD	UNCLASSIFIED EXCAVATION, AS PER PLAN	63				2/11
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION					LUMP
507	00100	640	FT	STEEL PILES HP 10X42, FURNISHED	640				
507	00150	640	FT	STEEL PILES HP 10X42, DRIVEN	640				
507	00200	540	FT	STEEL PILES HP 12X53, FURNISHED		540			
507	00250	540	FT	STEEL PILES HP 12X53, DRIVEN		540			
SPECIAL	50771200	115	FT	PILE ENCASEMENT		115			2/11
509	10000	53,934	POUND	EPOXY COATED REINFORCING STEEL	6789	2330	44,815		
511	32212	197	CU YD	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE			197		
511	50212	74	CU YD	CLASS QC1 CONCRETE WITH QC/QA, SUBSTRUCTURE	58	16			
512	10100	137	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	25	56	56		
512	33000	10	SQ YD	TYPE 2 WATERPROOFING	10				
516	13200	56	SQ FT	1/2" PREFORMED EXPANSION JOINT FILLER	56				
516	13600	76	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	76				
516	14014	117	FT	INTEGRAL ABUTMENT EXPANSION JOINT SEAL	117				
517	70000	206	FT	RAILING (TWIN STEEL TUBE)			206		
518	21200	50	CU YD	POROUS BACKFILL WITH FILTER FABRIC	50				
SPECIAL	51822300	185	FT	STEEL DRIP STRIP			185		2/11
518	40000	105	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	105				
518	40010	78	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	78				
526	15010	160	SQ YD	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=13")				160	
601	32200	333	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	333				
611	99710	4	EACH	PRECAST REINFORCED CONCRETE OUTLET	4				
613	41200	180	CU YD	LOW STRENGTH MORTAR BACKFILL	180				

QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY ON SHEET 14A

DESIGN AGENCY
MPC
COMPANIES

DATE
08/12

REVIEWED
JDH

STRUCTURE FILE NUMBER
7302207

DESIGNED
SRB/ZNG

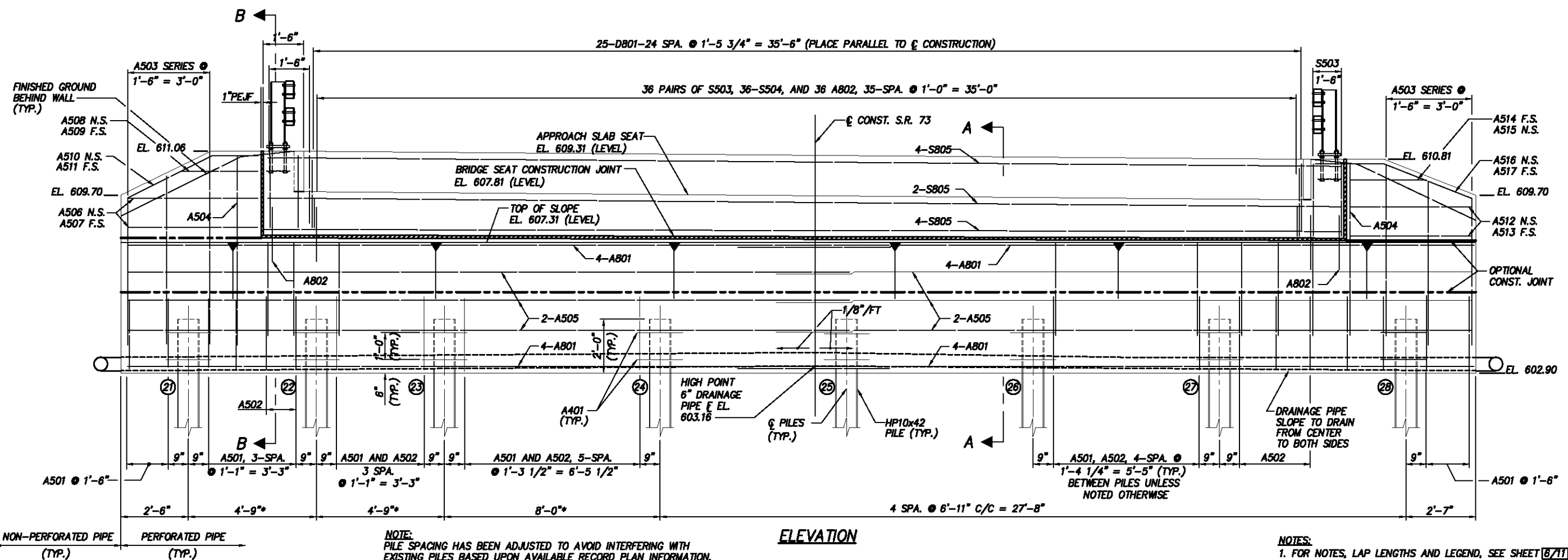
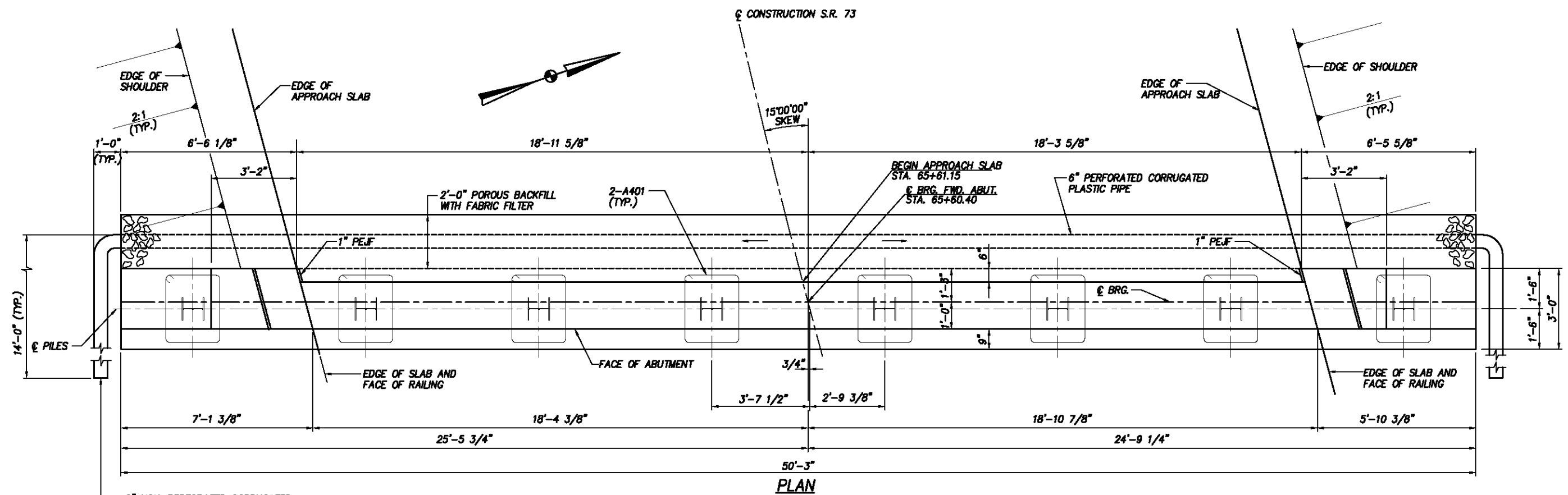
CHECKED
AJS

ESTIMATED QUANTITIES
BRIDGE NO. SCI-73-0123
OVER RARDEN CREEK

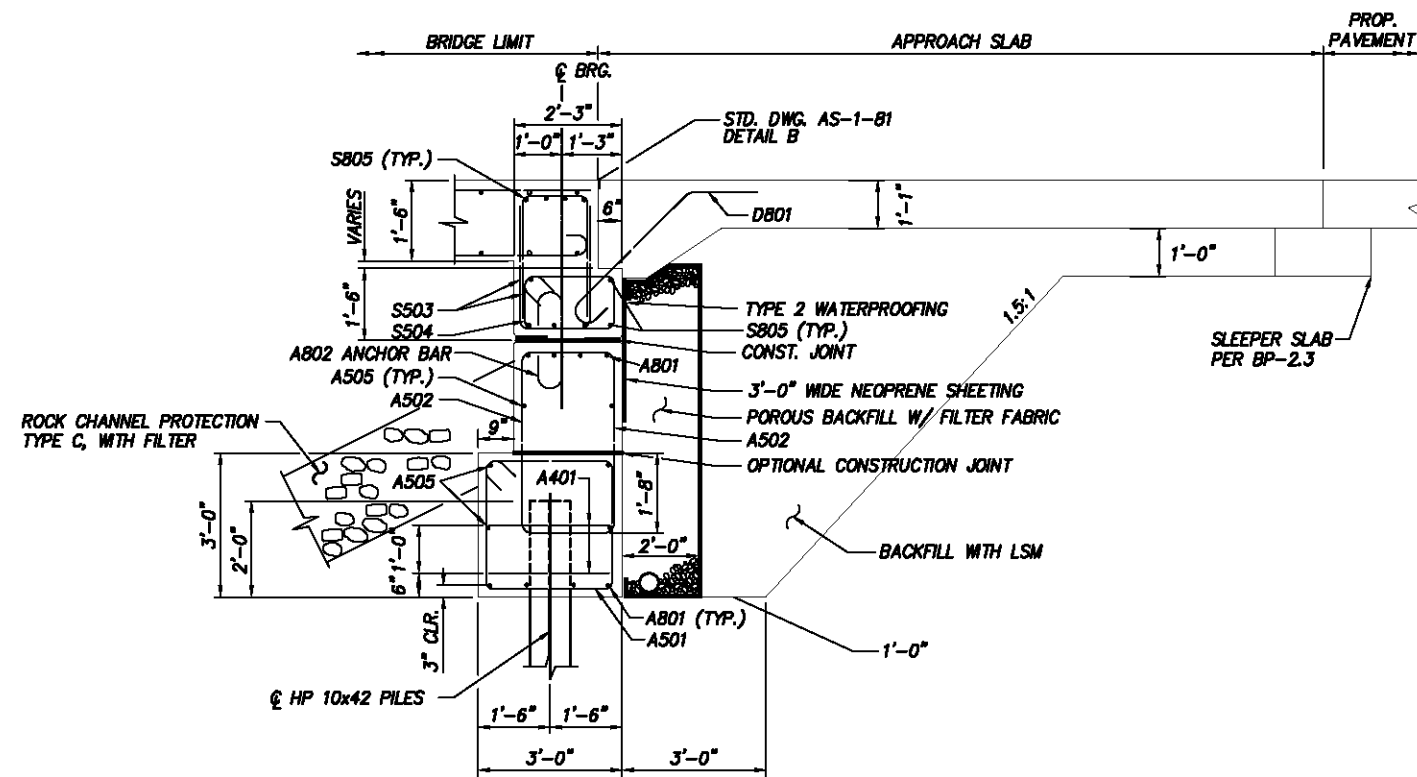
SCI-73-01.10
PID 13234

3 / 11

33
47

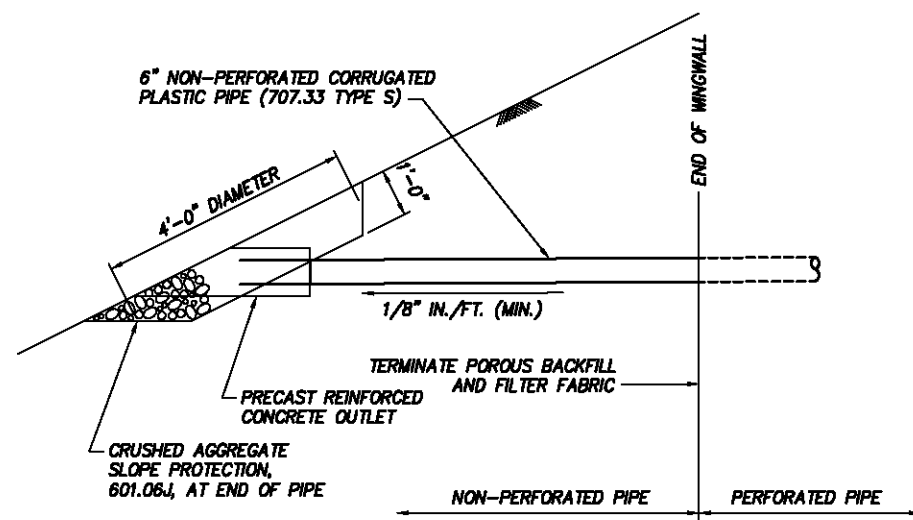


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Nov 19, 2014 9:45am



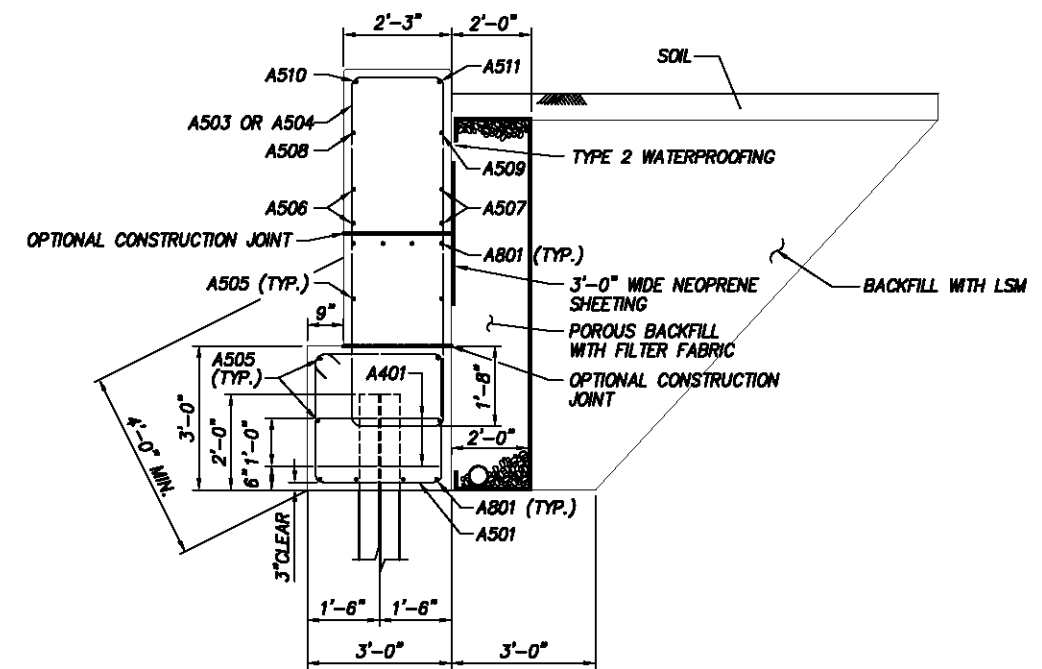
SECTION A-A

PLACE S503 AND S504 BARS PARALLEL
WITH THE DECK SLAB LONGITUDINAL BARS



TERMINATION OF 6" NON-PERFORATED CPP DETAIL

* REFER TO STD. CONSTR. DWG. DM-1.1 FOR "PRECAST REINFORCED CONCRETE OUTLET" DETAILS AND NOTES. INCLUDE WIRE CLOTH WITH ITEM 611 FOR PAYMENT.



SECTION B-B

LAP LENGTHS:

5 BARS = 3'-7"
8 BARS = 7'-3"

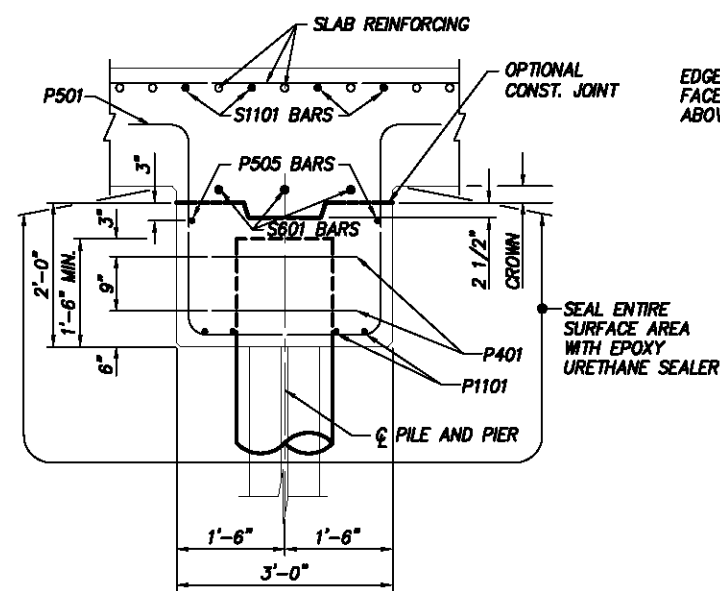
LEGEND:

① = PILE NUMBER
CONST. JT. = CONSTRUCTION JOINT
CPP = CORRUGATED PLASTIC PIPE
C/C = CENTER TO CENTER
CL = CENTER LINE
EL. = ELEVATION
F.S. = FAR SIDE
N.S. = NEAR SIDE
TYP. = TYPICAL

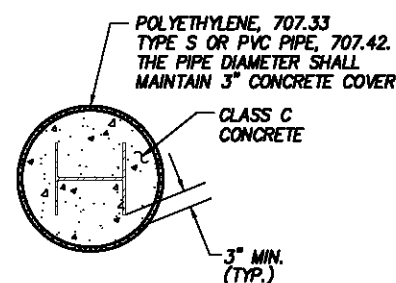
NOTES:

1. POROUS BACKFILL; POROUS BACKFILL 2'-0" THICK WITH FILTER FABRIC SHALL EXTEND UPWARD TO THE PLANE OF THE SUBGRADE, TO ONE FOOT BELOW THE EMBANKMENT SURFACE, AND Laterally TO THE ENDS OF THE WINGWALLS.
2. SEE STANDARD DRAWING NO. CPA-1-08 DATED 07-18-08 FOR MORE DETAILS.
3. TYPE 2 WATERPROOFING SHALL BE PLACED FROM THE LIMITS OF ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN TO THE BOTTOM OF THE PROPOSED APPROACH SLAB BETWEEN THE WINGWALLS OF THE ABUTMENT AS SHOWN.

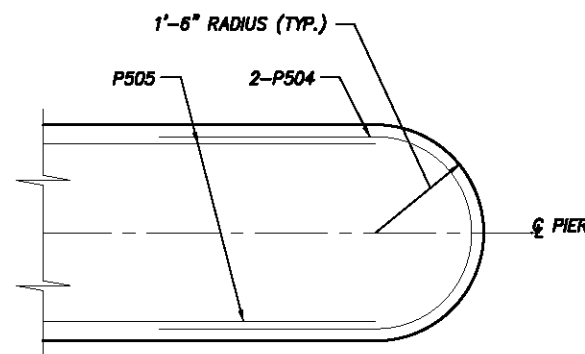
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May 18, 2011 10:00 AM



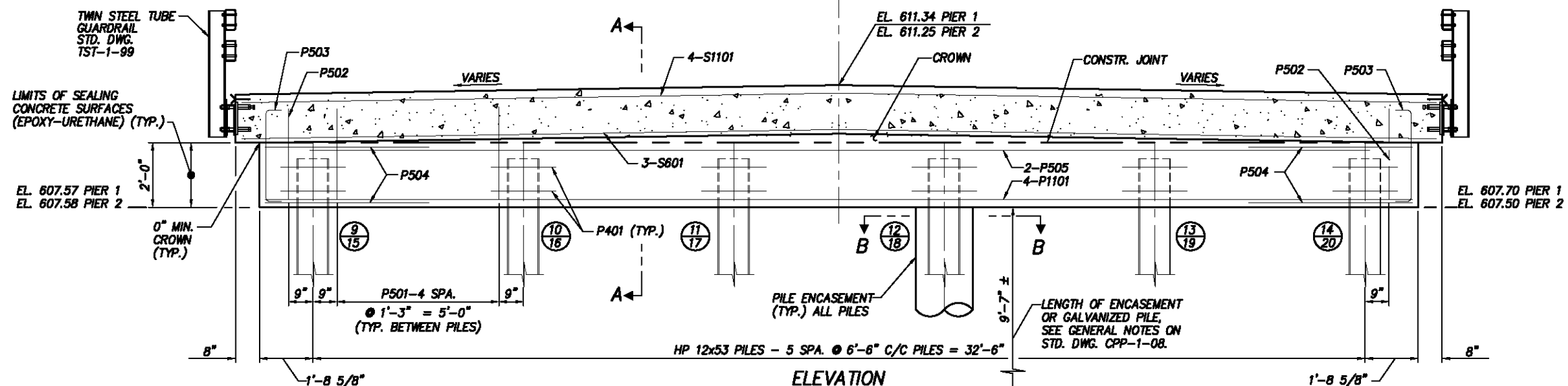
SECTION A-A



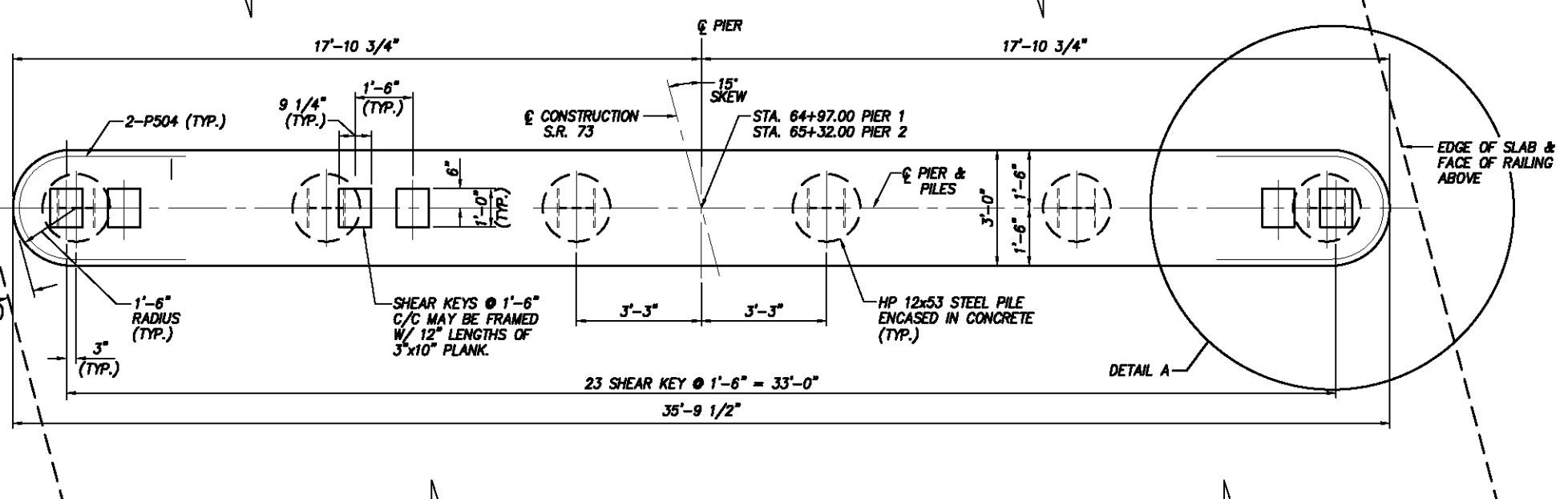
SECTION B-B
SHOWING PILE ENCASEMENT



DETAIL A



ELEVATION



PLAN

LEGEND:

&PILER = CENTER LINE
C/C = CENTER TO CENTER
CONSTR. = CONSTRUCTION
DWG. = DRAWING
EL. = ELEVATION
MIN. = MINIMUM
STD. = STANDARD
TYP. = TYPICAL
(9) PIER 1 PILE NO.
(15) PIER 2 PILE NO.

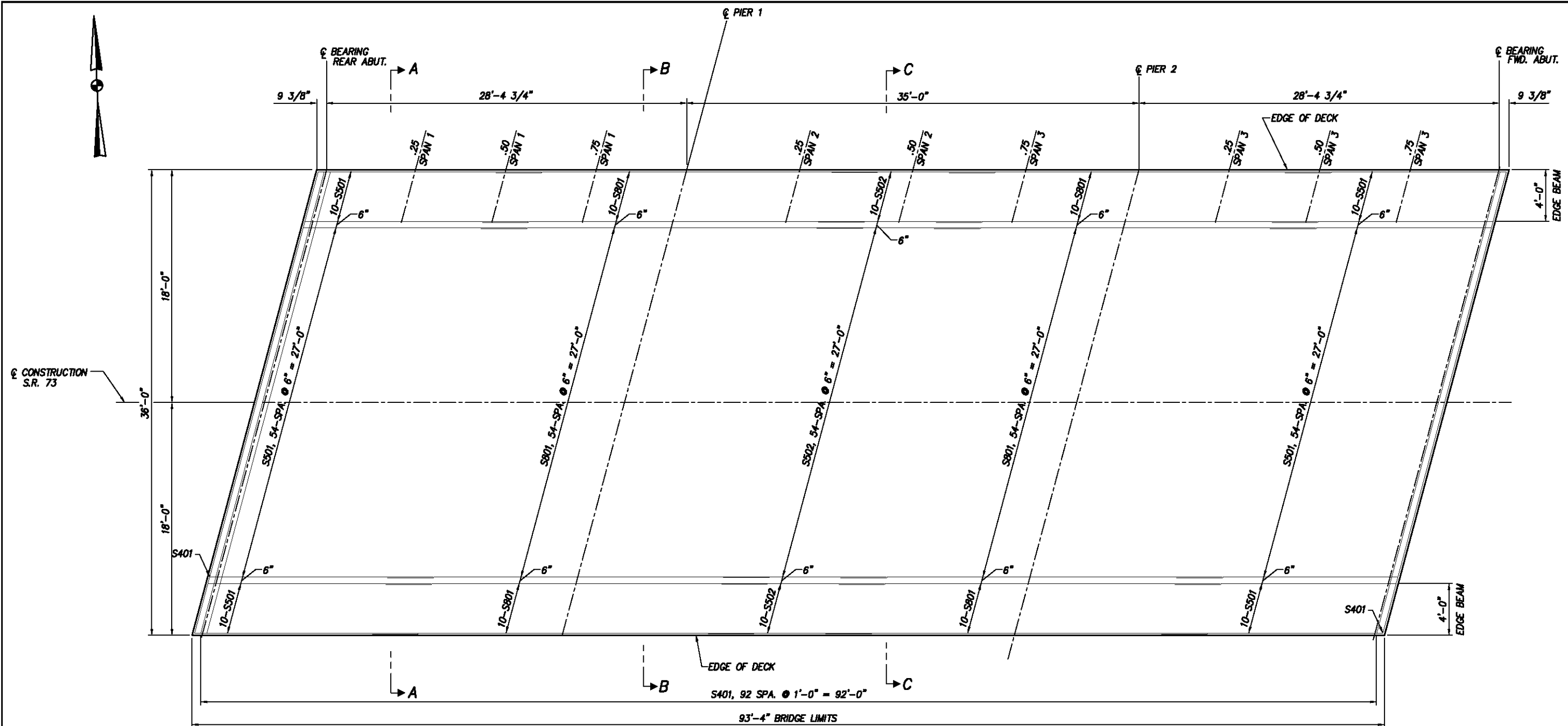
NOTES:

SEE STD. DWG. CPP-1-08 DATED 07-19-13 FOR MORE DETAILS.

LAP LENGTHS:

5 BAR = 3'-7"
6 BAR = 4'-4"

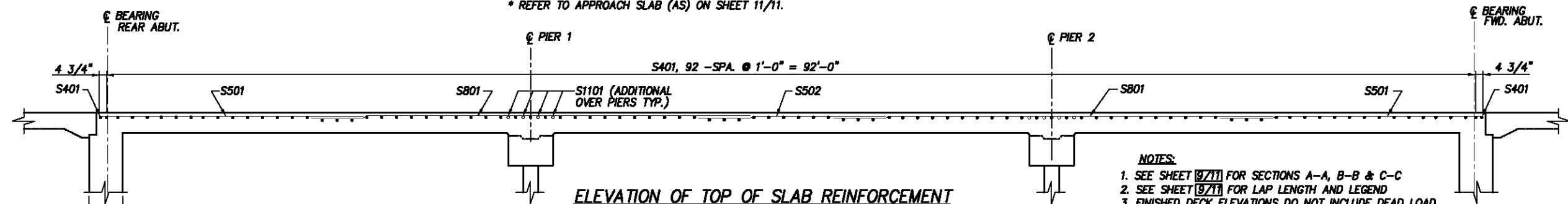
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May 15, 2014, 9:47am



TOP OF SLAB REINFORCEMENT PLAN

OFFSET	LOCATION	BRIDGE FINISHED DECK ELEVATIONS																	
		*BEGIN AS	*MID-PT AS	CL BRG RA	.25 SPAN 1	.50 SPAN 1	.75 SPAN 1	CL BRG P-1	.25 SPAN 2	.50 SPAN 2	.75 SPAN 2	CL BRG P-2	.25 SPAN 3	.50 SPAN 3	.75 SPAN 3	CL BRG FA	*MID-PT AS	*END AS	
18.00	LEFT	EL	610.95	610.98	611.03	611.05	611.06	611.06	611.06	611.04	611.03	611.05	611.07	611.08	611.08	611.07	611.06	611.03	610.99
		STA.	64+53.17	64+63.17	64+73.82	64+80.82	64+87.82	64+94.82	65+01.82	65+10.57	65+19.32	65+28.07	65+36.82	65+43.82	65+50.82	65+57.82	65+64.82	65+75.47	65+85.47
0.00	CL	EL	611.20	611.25	611.30	611.32	611.33	611.34	611.34	611.33	611.31	611.32	611.25	611.21	611.16	611.11	611.05	610.95	610.85
		STA.	64+48.35	64+58.35	64+69.00	64+76.00	64+83.00	64+90.00	65+05.75	65+14.50	65+23.25	65+32.00	65+39.00	65+46.00	65+53.00	65+60.00	65+70.65	65+80.65	65+90.65
18.00	RIGHT	EL	611.28	611.30	611.33	611.32	611.29	611.26	611.19	611.12	611.04	611.02	610.99	610.95	610.91	610.87	610.81	610.72	610.62
		STA.	64+43.53	64+53.53	64+64.18	64+71.18	64+78.18	64+85.18	64+92.18	65+00.93	65+09.68	65+18.43	65+27.18	65+34.18	65+41.18	65+48.18	65+55.18	65+65.83	65+75.83

* REFER TO APPROACH SLAB (AS) ON SHEET 11/11.

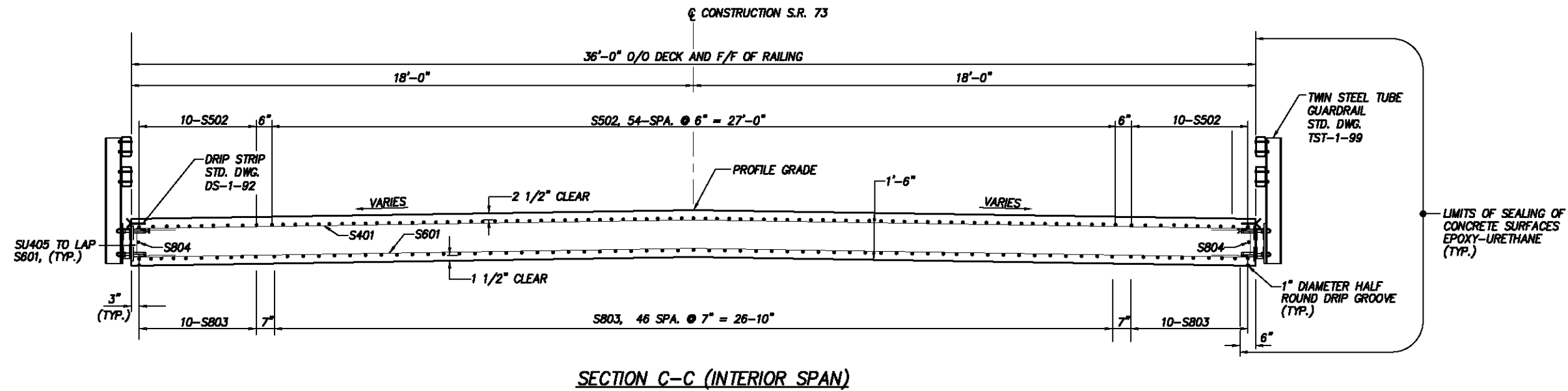
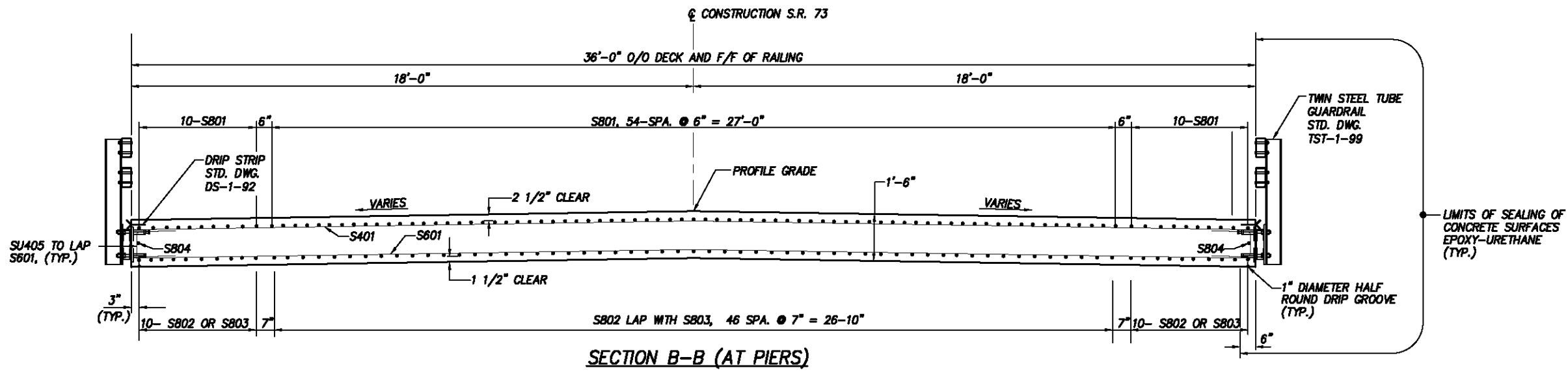
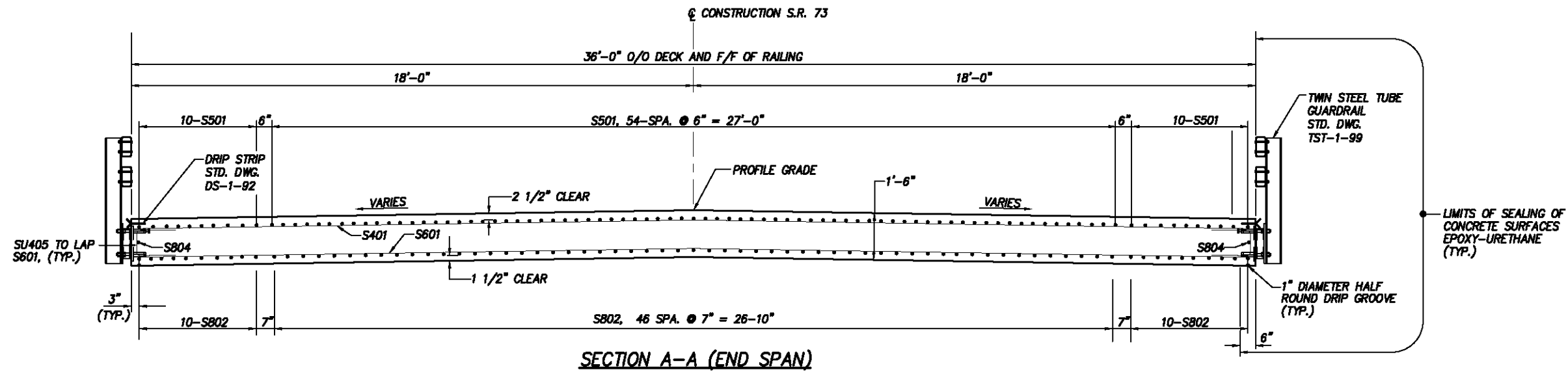


ELEVATION OF TOP OF SLAB REINFORCEMENT

NOTES:

1. SEE SHEET 9/11 FOR SECTIONS A-A, B-B & C-C
2. SEE SHEET 9/11 FOR LAP LENGTH AND LEGEND
3. FINISHED DECK ELEVATIONS DO NOT INCLUDE DEAD LOAD CAMBER AND FORM WORK DEFLECTION ALLOWANCES.

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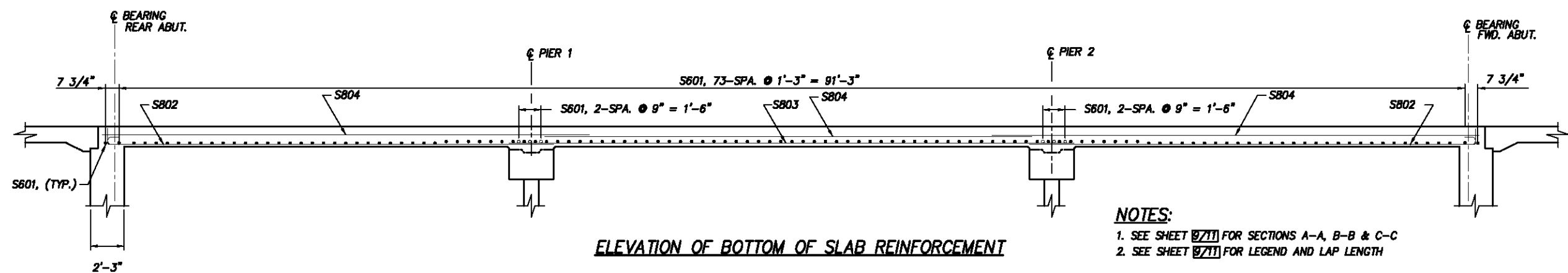
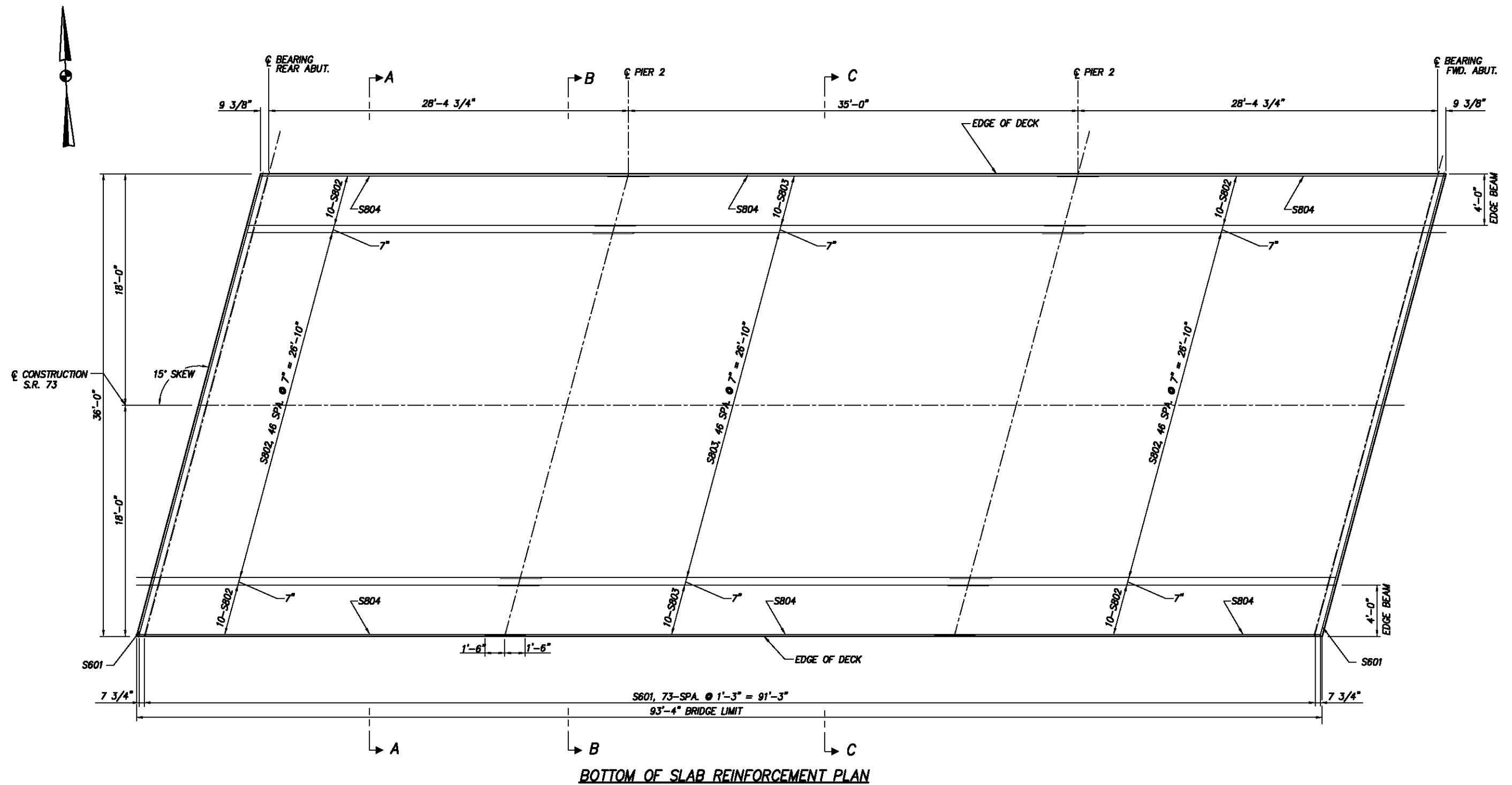
- LAP LENGTHS:**
- 1. # 4 BARS = 3'-0"
 - # 5 BARS = 3'-6"
 - # 6 BARS = 4'-4"
 - # 8 BARS = 6'-9"
 - # 9 BARS = 8'-7"
 - # 10 BARS = 10'-10"

LEGEND:

TYP. = TYPICAL

O/O = OUT TO OUT

F/F = FACE TO FACE

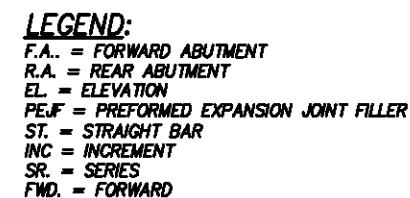
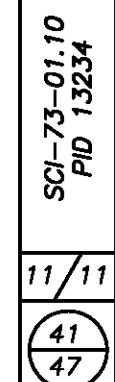
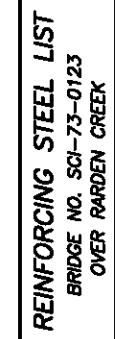


ME **COMPANIES**

DESIGN AGENCY

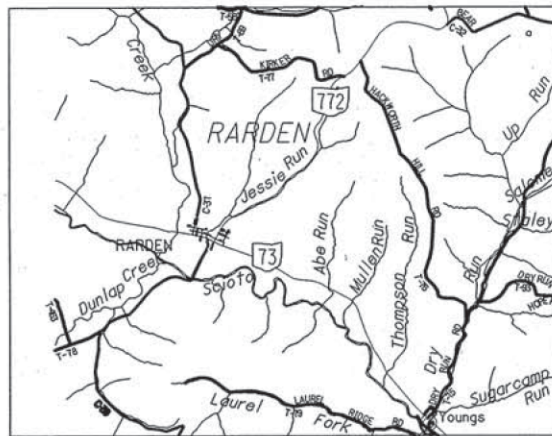
635 Riverside Blvd., 10th Fl.
New York, NY 10020
Contact: Ivan A. Rosen
617-875-1800 ext. 306
Fax: 617-818-1901

DESIGNED	SRB/ZNG	DESIGNED	ZNG	REVIEWED	JDH	DATE	08/12
CHECKED	AJS	REVIEWED		STRUCTURE FILE NUMBER 7302207			



1. REFER TO STD. CONSTR. DWG. AS-1-81, REVISED 01-18-13 FOR SECTIONS A-A AND B-B AND ADDITIONAL DETAILS AND NOTES NOT SHOWN.
2. REFER TO TABLE OF FINISHED DECK ELEVATIONS ON SHEET B/11 FOR STATIONS, OFFSETS AND ELEVATIONS AT DESIGNATED LOCATION.
3. THE REAR ABUTMENT APPROACH SLAB IS DIMENSIONED FROM THE BACK TANGENT AND HAS BEEN WIDENED ALONG THE LEFT EDGE TO ACCOMMODATE THE 185' SPIRAL ROADWAY ALIGNMENT.
4. DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED.
5. ALL REINFORCING STEEL IS EPOXY COATED.

APPROACH SLAB PLAN



LOCATION MAP
NTS



UTILITY OWNERS	
ELECTRIC (DISTRIBUTION)	AMERICAN ELECTRIC POWER 850 TECH CENTER DRIVE GAHANNA, OH 43230 (614) 883-6831
TELEPHONE	FRONTIER COMMUNICATIONS 1315 ALBERT STREET PORTSMOUTH, OHIO 45662 (740) 354-0512
CABLE TV	TIME WARNER CABLE 3760 INTERCHANGE DRIVE COLUMBUS, OHIO 43204-4131 (614) 255-6349
GAS	NONE APPARENT
WATER	NORTH WEST REGIONAL WATER DISTRICT P.O. BOX 158 McDERMOTT, OHIO 45652 (740) 259-2789
ELECTRIC (TRANSMISSION)	AMERICAN ELECTRIC POWER 700 MORRISON ROAD GAHANNA, OHIO 43230 (614) 552-1801

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING

LEGEND:

- WL = FEE SIMPLE WITH LIMITATION OF ACCESS
- WD = WARRANTY DEED
- BS = BILL OF SALE
- PRW = PROPERTY RIGHT FEE SIMPLE
- SH = STANDARD HIGHWAY EASEMENT
- LA = LIMITED ACCESS EASEMENT
- T = TEMPORARY EASEMENT
- SL = SLOPE EASEMENT
- S = SEWER EASEMENT
- CH = CHANNEL EASEMENT
- FL = FLOW EASEMENT
- U = UTILITY EASEMENT
- A = AERIAL EASEMENT
- PRE = PROPERTY RIGHT
- SC = SCENIC EASEMENT
- V = IN NAME OF ANOTHER STATE AGENCY, LPA, ETC.
- R = SPECIAL RESERVATION
- WA = WORK AGREEMENT
- SA = SPECIAL AGREEMENT AND WAIVER OF DAMAGES

CONVENTIONAL SYMBOLS

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

RIGHT OF WAY LEGEND SHEET SCI-73-1.10

RARDEN TOWNSHIP
VILLAGE OF RARDEN
SCIOTO COUNTY, OHIO
V.M.S. NO. 2345

INDEX OF SHEETS:

TITLE SHEET	1
CENTERLINE PLAT	2
PROPERTY MAP	3
SUMMARY SHEET	4
DETAIL SHEETS	5-7

PROJECT DESCRIPTION

THIS PROJECT IS TO REPLACE THE BRIDGE OVER RARDEN CREEK ON A RELOCATED ALIGNMENT DOWNSTREAM OF THE EXISTING STRUCTURE.

PROJECT CONTROL

STATE PLANE GRID OHIO SOUTH ZONE, NAD83
(COORS96)EPOCH 2002.0, TRANSLATED TO GROUND
COORDINATE VALUES USING THE PROJECT
ADJUSTMENT FACTOR 1.000050603

PLANS PREPARED BY:

FIRM NAME: M-E COMPANIES, INC. CINCINNATI, OHIO

PLANS PREPARED BY: RODNEY A. SAYLOR, SCOTT R. LINDGREN

FIELD REVIEW BY: DANIEL COX, THOM STOCKOFF

DATE COMPLETED: 10-03-13

OWNERSHIP VERIFIED BY: THOM STOCKOFF

DATE COMPLETED: 10-03-13

DATE COMPLETED: 10-03-13

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF TRANSPORTATION IN SEPT. 2011 BY M-E COMPANIES.

THE ESTABLISHMENT OF THE PROPERTY LINES AND RIGHT OF WAY LINES SHOWN ON THIS PLAN AS OF THIS DATE WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION

BY RYAN M. HUTSON
SURVEYOR'S NAME
SURVEYOR NO. 8586 DATE 10/03/13.

SURVEYORS SEAL



SIGNED: Ryan M. Hutson
DATE: 10-3-13

RIGHT OF WAY
LEGEND SHEET

SCI-73-1.10

1 / 7

42
47

FEDERAL PROJECT NO.
E 070 (066)

PID NO.
13234

CALCULATED
RAS
CHECKED
SRL

THE PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE CENTERLINE OF SURVEY AND CONSTRUCTION.

ADJUSTABLE CENTERLINE MONUMENTS, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM 1.1 (REV. 1-18-13) OF THE OHIO DEPARTMENT OF TRANSPORTATION. THE PLACING OF THE MONUMENTS SHALL BE UNDER THE DIRECTION OF A SURVEYOR REGISTERED IN THE STATE OF OHIO AND ARE TO BE SET, AS CONSTRUCTION. ANY ALTERATIONS, WITH PRIOR APPROVAL OF THE OHIO DEPARTMENT OF TRANSPORTATION, SHALL BE NOTED AND ODOT SHALL BE NOTIFIED OF THE NEW LOCATIONS.

MONUMENTS TO BE SET DURING CONSTRUCTION		
STATION	REFERENCE MONUMENT DIST. FROM C. OF SURVEY	
	LEFT	RIGHT
S.R. 73		
POT STA. 57+00.00	17.00'	17.00'
TS STA. 58+71.60	20.00'	20.00'
SC STA. 60+56.60	20.00'	19.00'
CS STA. 62+85.68	20.00'	20.00'
ST STA. 64+70.68	22.00'	22.00'
PC STA. 67+02.44	20.00'	20.00'
PT STA. 69+20.83	20.00'	20.00'
POT STA. 71+00.00	20.00'	20.00'
TOTALS	8	8

SCI-73-1.10
V.M.S. 2345
RARDEN TOWNSHIP
VILLAGE OF RARDEN
SCIOTO COUNTY, OHIO



13234

RAS
SRL

CENTERLINE PLAT

SCI-73-1.10

2 / 7

43
47

EX. CENTERLINE CURVE DATA

$\Delta = 25^{\circ}04'32''$ RT.
 $Dc = 7^{\circ}31'55''$
 $T = 169.17'$
 $R = 760.71'$
 $L = 332.93'$
 $CH L = 330.28'$
 $CH BRG = S 81^{\circ}06'22'' E$

EX. CENTERLINE CURVE DATA

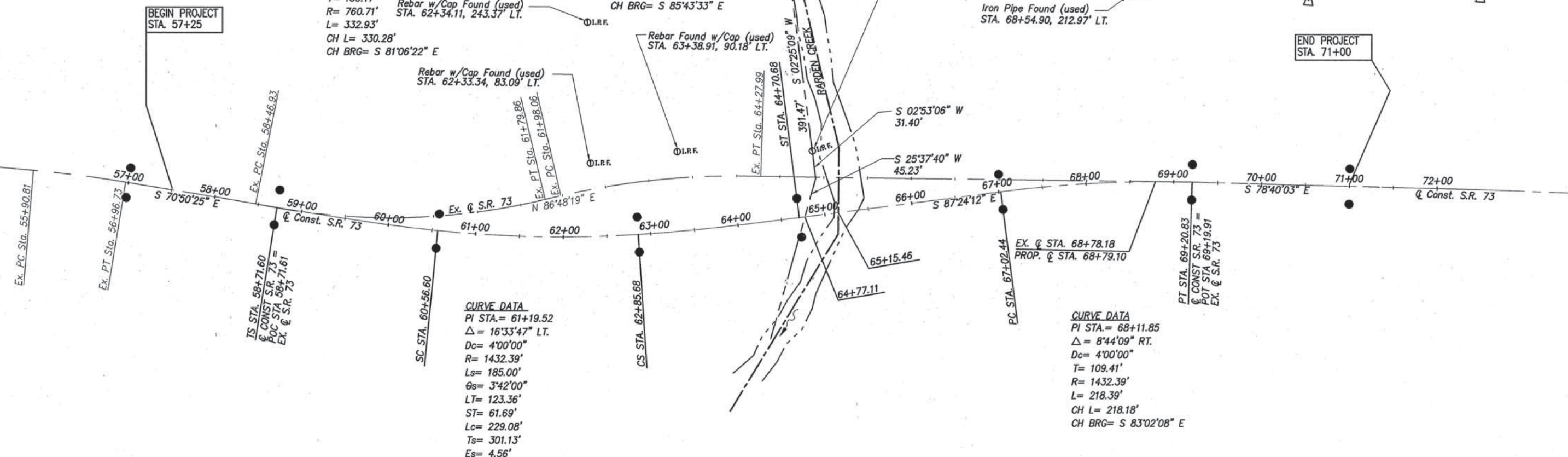
$\Delta = 14^{\circ}56'15''$ LT.
 $Dc = 6^{\circ}30'00''$
 $T = 115.62'$
 $R = 881.95'$
 $L = 229.93'$
 $CH L = 229.28'$
 $CH BRG = S 85^{\circ}43'33'' E$

CURVE DATA

PI STA. = 61+19.52
 $\Delta = 16^{\circ}33'47''$ LT.
 $Dc = 4^{\circ}00'00''$
 $R = 1432.39'$
 $Ls = 185.00'$
 $\theta s = 3^{\circ}42'00''$
 $LT = 123.36'$
 $ST = 61.69'$
 $Lc = 229.08'$
 $Ts = 301.13'$
 $Es = 4.56'$

CURVE DATA

PI STA. = 68+11.85
 $\Delta = 8^{\circ}44'09''$ RT.
 $Dc = 4^{\circ}00'00''$
 $T = 109.41'$
 $R = 1432.39'$
 $L = 218.39'$
 $CH L = 218.18'$
 $CH BRG = S 83^{\circ}02'08'' E$



SURVEYORS SEAL



SIGNED: *Ryan M. Hutson*
DATE: 10-3-13

BASIS OF BEARING

ALL BEARINGS SHOWN ARE FOR PROJECT USE ONLY. BEARINGS ARE BASED ON TRUE NORTH DERIVED FROM GPS OBSERVATIONS USING ODOT CORS NETWORK STATIONS, CONVERTED TO THE OHIO STATE PLANE SOUTH ZONE, HORIZONTAL DATUM NAD83(CORS96), EPOCH 2002.0

NOTE: THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE DETERMINED BASED ON EXISTING MONUMENTATION FOUND AND ROAD RECORD BOOK 1 PG. 193 DATED 9/5/24.

MONUMENT LEGEND

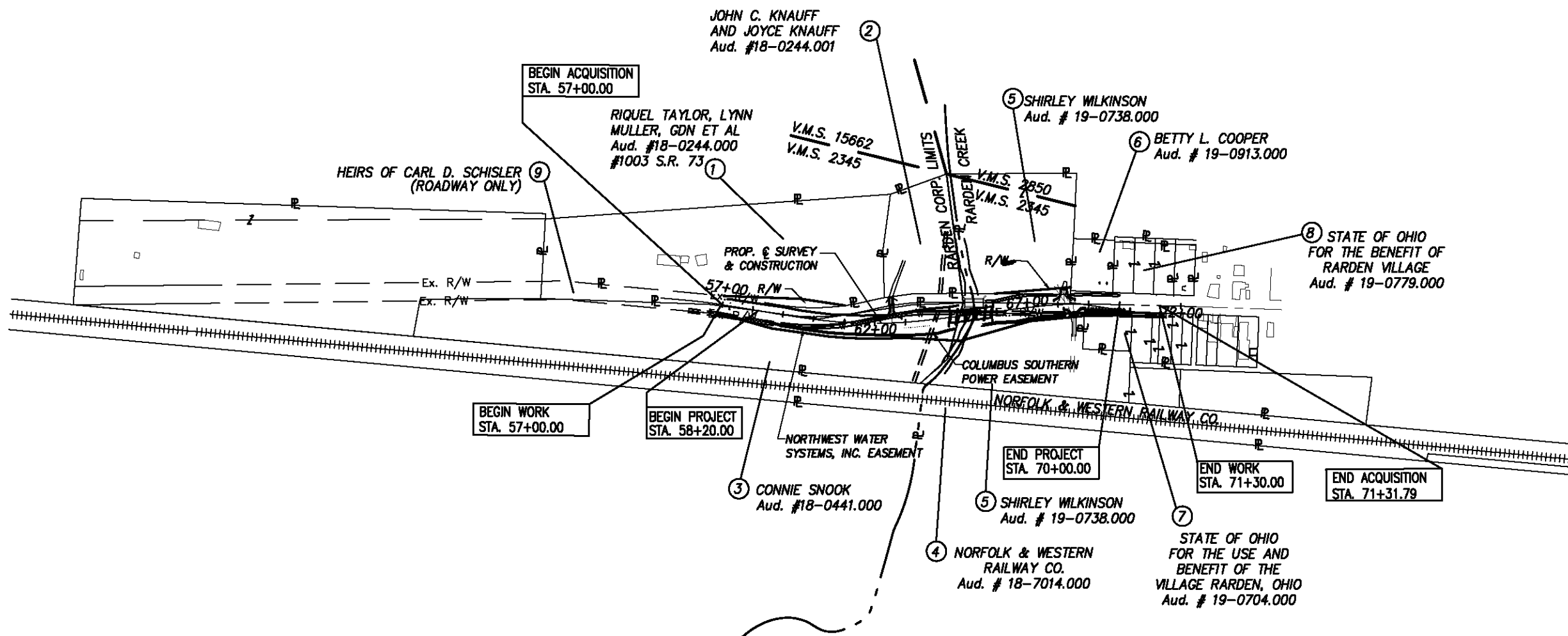
- DI.R.F. REBAR WITH CAP FOUND
- STONE FOUND
- IRON PIPE FOUND
- PROPOSED CONCRETE MONUMENT

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF TRANSPORTATION IN SEPT. 2011 BY M-E COMPANIES.

THE ESTABLISHMENT OF THE PROPERTY LINES AND RIGHT OF WAY LINES SHOWN ON THIS PLAN AS OF THIS DATE WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION
BY RYAN M. HUTSON
SURVEYOR'S NAME
SURVEYOR NO. 8588 DATE 10/03/13.

RECEIVED _____, 20____
RECORDED _____, 20____
BOOK _____ PAGE _____
COUNTY RECORDER

SCI-73-1.10
V.M.S. 2345
RARDEN TOWNSHIP
VILLAGE OF RARDEN
SCIOTO COUNTY, OHIO



UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
Call 800-362-2764 (Toll Free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

STRUCTURE KEY:

- COMMERCIAL BUILDING
- RESIDENTIAL BUILDING

REV	DATE	DESCRIPTION

PLAN COMPLETED: 8-15-12



PID NO.
13234
R/W DESIGNER
RMH
R/W REVIEWER
SRL

PROPERTY MAP

SCI-73-1.10

3 / 7
44
47

TOTAL NUMBER OF:
5 OWNERSHIPS
5 PARCELS
0 TOTAL TAKES
0 OWNERSHIP WITH STRUCTURES INVOLVED
0 OWNERSHIP WITH "P" ITEMS

NET RESIDUE = RECORD AREA - TOTAL P.R.O. - NET TAKE
ALL AREAS IN ACRES

PARCEL NO.	OWNER	SHEET NO.	OWNERS BOOK	RECORD PAGE	AUDITOR'S PARCEL	AUDITOR'S AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE		TYPE FUND	REMARKS	AS REQUIRED	
												LEFT	RIGHT			BOOK	PAGE
1-WD	RIQUEL TAYLOR, LYNN MULLER, GDN ETAL	4 & 5	756	731	18-0244.000	5.645 AC.	0.0 AC.	0.1423 AC.	0.0000 AC.	0.1423 AC.	NO	5.5027 AC.		100% STATE	CURRENT OWNERS ACQUIRE TITLE VIA QUIT CLAIM DB 945 PG 634 AND CERT. TRANS. O.R. 1008 PG466 NO R/W REQUIRED		
2	DAVID LYNN ADAMS & KRISTINA LEA ADAMS J/S	5	912	611	18-0244.001	1.855 AC.											
3A-WD	JEREMY CRUM AND KRISTIN CRUM AND JAY CRUM	4 & 5	312	5	18-0441.002	7.512 AC.	0.7299 AC.	1.5454 AC.	0.4995 AC.	1.0459 AC.	NO		5.7666 AC.				
3	CONNIE SNOOK	4 & 5	790	185	18-0441.000	93.726 AC.					NO				NO LONGER USED NO R/W REQUIRED		
4	NORFOLK & WESTERN RAILWAY CO.	2	71	9	18-7014.000										NO R/W REQUIRED		
5-WD	ANGELA SUE WHITE	5 & 6	357	284	19-0738.000 19-0718.000 19-0736.000 19-0739.000 19-0740.000 GRAND TOTAL	4.220 AC. 3.77 AC. 0.3 AC. 1.48 AC. 1.0 AC. 10.77 AC.	0.0645 AC. 0.4824 AC.	0.4854 AC. 0.5507 AC.	0.0645 AC. 0.4824 AC.	0.4209 AC. 0.0683 AC.	NO			100% STATE	REMOVE 155 L.F. OF WOODEN FENCE NO TAKE THIS PARCEL NO TAKE THIS PARCEL NO TAKE THIS PARCEL		
6	BETTY COOPER	6	900	784	19-0913.000 18-0961.000 GRAND TOTAL	3.07 AC. 11.24 AC. 14.31 AC.									NO R/W REQUIRED		
7-WD	STATE OF OHIO FOR THE USE AND BENEFIT OF THE VILLAGE OF RARDEN, OHIO	6	943 943 944	461 465 25	19-0704.000 19-0760.000 19-0781.000 19-0836.000 19-0837.000 GRAND TOTAL	0.380 AC. 0.250 AC. 0.159 AC. 0.091 AC. 0.250 AC. 1.130 AC.	0.0 AC. 0.0525 AC.	0.0525 AC.	0.000 AC.	0.0525 AC.	NO			100% STATE			
8	STATE OF OHIO FOR THE BENEFIT OF RARDEN VILLAGE	6	943	469	19-0779.000	0.500 AC.									NO R/W REQUIRED		
9-WD	HEIRS OF CARL D. SCHISLER	4 & 5	261	275	UNKNOWN	1.2128 (c) AC.		1.2128 AC.	1.2128 AC.	0.000 AC.	NO	0.0000	0.0000		PRO ONLY PARCEL NO. ETC. UNABLE TO BE DETERMINED BY TITLE SEARCH		

(c) - CALCULATED AREA

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

NOTE: THE DURATION OF ALL TEMPORARIES IS 24 MONTHS.

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

LEGEND
WD = WARRANTY DEED
T = TEMPORARY EASEMENT
CH = CHANNEL EASEMENT
SC = SCENIC EASEMENT
V = IN NAME OF ANOTHER STATE AGENCY, LPA, ETC.

RMH	03-18-14	UPDATE PARCEL 5 WD
RMH	07-03-13	UPDATE PARCEL 3A AND PARCEL 5 INFO
RAS	10-24-12	UPDATE PARCEL 3A INFO
REV	DATE	DESCRIPTION
FIELD REVIEW BY FGW, ADW		DATE: 8-15-12
OWNERSHIP VERIFIED BY FGW, ADW		DATE: 8-15-12
DATE COMPLETED:		DATE: 8-15-12

DESIGN PROJECT NO. E 070 (066)

STATE JOB NO. 93260

PD NO. 13234

R/W DESIGNER RAS R/W REVIEWER SRL

SUMMARY OF ADDITIONAL RIGHT OF WAY

SCI-73-1.10

4 / 7

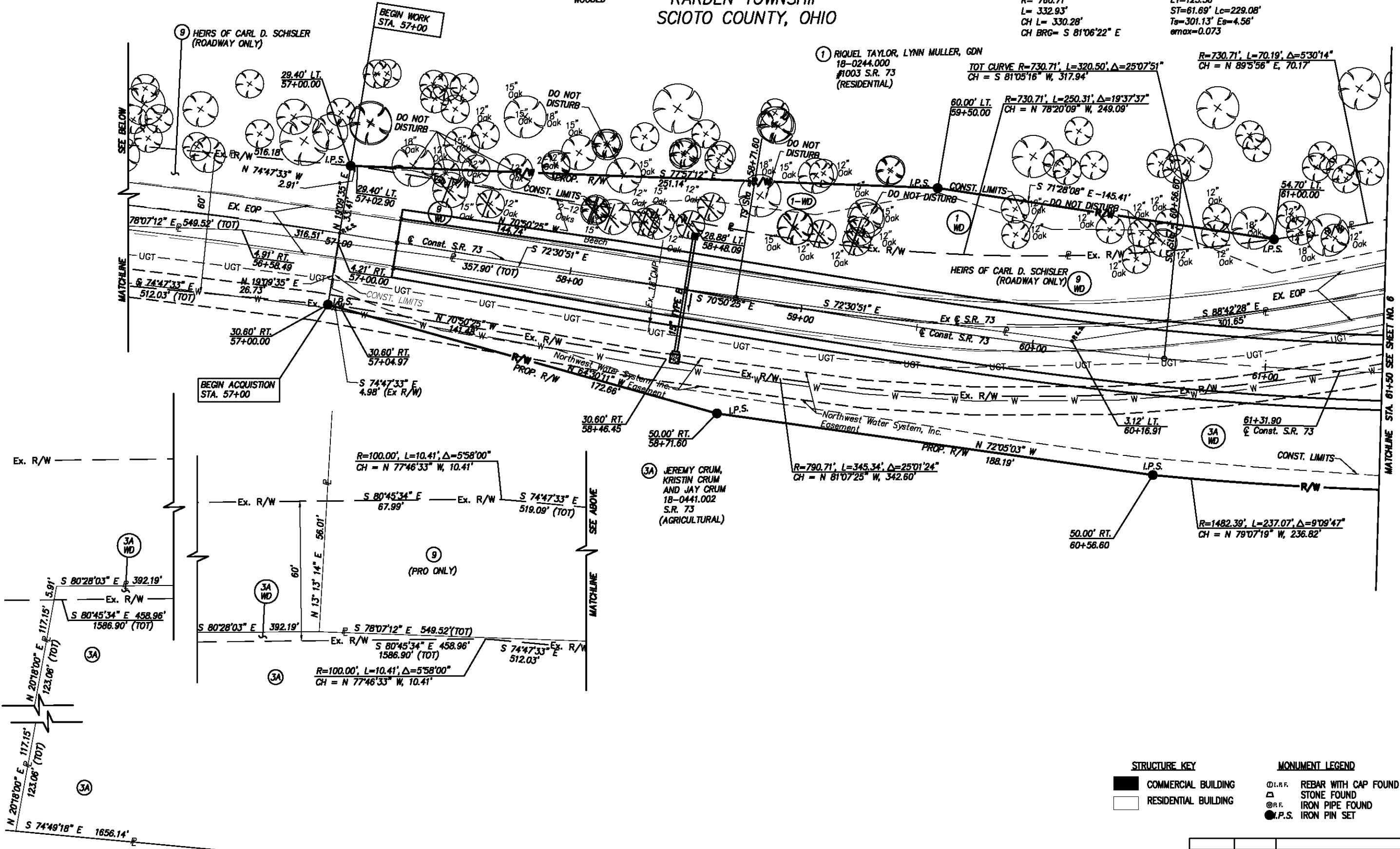
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47

SCI-73-1.10
V.M.S. 2345
RARDEN TOWNSHIP
SCIOTO COUNTY, OHIO

WOODED

EX. & CURVE DATA
 $\Delta = 25^\circ 04' 32''$ RT.
 $Dc = 731' 55''$
 $T = 169.17'$
 $R = 760.71'$
 $L = 332.93'$
 $CH L = 330.28'$
 $CH BRG = S 81^\circ 06' 22'' E$

PROP. & CURVE DATA
 $PI STA. = 61+19.52 \Delta = 16^\circ 33' 47''$ LT.
 $Dc = 4' 00' 00'' R = 1432.39'$
 $Ls = 185.00' Os = 3' 42' 00''$
 $LT = 123.36'$
 $ST = 61.69' Lc = 229.08'$
 $Ts = 301.13' Es = 4.56'$
 $emax = 0.073$



- STRUCTURE KEY**
- COMMERCIAL BUILDING
 - RESIDENTIAL BUILDING
- MONUMENT LEGEND**
- I.R.F. REBAR WITH CAP FOUND
 - △ STONE FOUND
 - △ R.F. IRON PIPE FOUND
 - I.P.S. IRON PIN SET

ZNG	11-15-12	UPDATE PARCEL 3A INFORMATION
REV	DATE	DESCRIPTION
PLAN COMPLETED: 10-24-12		

20'

0'

HORIZONTAL SCALE IN FEET

PROJ. NO. 13234

R/S DESIGNER RAS

R/W REVIEWER SRL

RIGHT-OF-WAY PLAN

STA. 57+00 TO 61+50

SCI-73-1.10

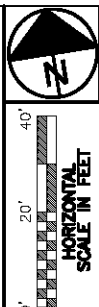
5 / 7

46

47

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May 18, 2011, 10:00am

SCI-73-1.10
V.M.S. 2345
RARDEN TOWNSHIP
SCIOTO COUNTY, OHIO



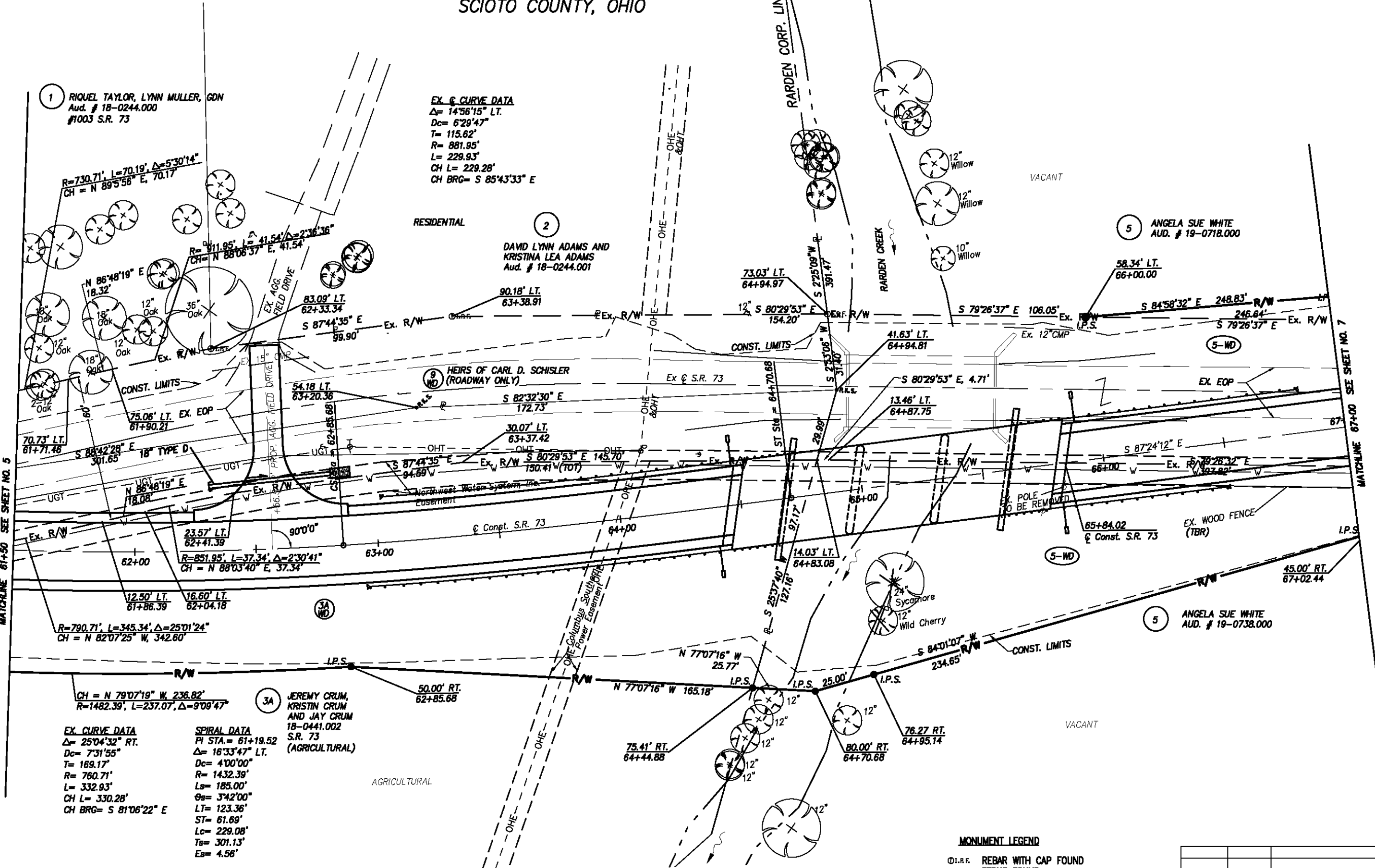
PD NO. 13234
R/W DESIGNER RAS
R/W REVIEWER SRL

RIGHT-OF-WAY PLAN
STA. 61+50 TO 67+00

SCI-73-1.10

6 / 7

47
47



1 RIQUEL TAYLOR, LYNN MULLER, GDN
Aud. # 18-0244.000
#1003 S.R. 73

EX. & CURVE DATA
Δ= 14°56'15" LT.
Dc= 6'29'47"
T= 115.62'
R= 881.95'
L= 229.93'
CH L= 229.28'
CH BRG= S 85°43'33" E

2 DAVID LYNN ADAMS AND
KRISTINA LEA ADAMS
Aud. # 18-0244.001

5 ANGELA SUE WHITE
AUD. # 19-0718.000

9 HEIRS OF CARL D. SCHISLER
(ROADWAY ONLY)

5 ANGELA SUE WHITE
AUD. # 19-0738.000

3A JEREMY CRUM,
KRISTIN CRUM
AND JAY CRUM
18-0441.002
S.R. 73
(AGRICULTURAL)

EX. CURVE DATA
Δ= 25°04'32" RT.
Dc= 7'31'55"
T= 169.17'
R= 760.71'
L= 332.93'
CH L= 330.28'
CH BRG= S 81°06'22" E

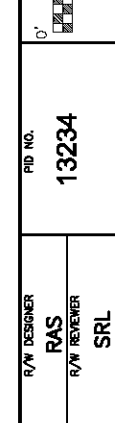
SPIRAL DATA
PI STA= 61+19.52
Δ= 18°33'47" LT.
Dc= 4'00'00"
R= 1432.39'
Ls= 185.00'
Θs= 3°42'00"
LT= 123.36'
ST= 61.69'
Lc= 229.08'
Ts= 301.13'
Es= 4.56'

- MONUMENT LEGEND
- ① I.R.F. REBAR WITH CAP FOUND
 - △ STONE FOUND
 - ⊙ I.P.F. IRON PIPE FOUND
 - I.P.S. IRON PIN SET

RMH	07-03-13	REVISED PARCEL 5 OWNERSHIP
REV	DATE	DESCRIPTION
PLAN COMPLETED: 10-24-12		

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May 20, 2019, 1:06 PM

A north arrow pointing upwards and a horizontal scale bar marked from 0 to 40 feet in increments of 10 feet.



SCI-73-1.10

7 / 7
47A
47

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May 19, 2014, 9:41am

GEOLOGY OF THE SITE

THE SITE LIES OUTSIDE OF THE LIMITS OF GLACIATION IN OHIO. HOWEVER, THE CREEK BED CONTAINS SOME OUTWASH SAND AND GRAVEL DEPOSITS. IN THE VICINITY OF THE PROJECT SITE, THE TOP OF BEDROCK WAS ENCOUNTERED AT DEPTHS RANGING FROM 29.5 TO 37.0 FEET BELOW EXISTING GRADE. THE BEDROCK BELOW THE SITE CONSISTS OF SHALE OR CLAYSHALE.

EXPLORATION

FOUR (4) STRUCTURE TEST BORINGS, DESIGNATED AS B-1 THROUGH B-4, WERE DRILLED AND CORED IN THE VICINITY OF THE PROPOSED STRUCTURE. BORINGS B-1 AND B-4 WERE DRILLED IN THE VICINITY OF THE PROPOSED ABUTMENTS. BORINGS B-2 AND B-3 WERE DRILLED IN THE VICINITY OF THE PROPOSED PIERS. ADDITIONALLY, TWO (2) ROADWAY TEST BORINGS WERE DRILLED IN THE AREA OF THE PROPOSED APPROACH EMBANKMENTS. THE TEST BORINGS WERE ADVANCED WITH A TRUCK MOUNTED DRILLING RIG UTILIZING HOLLOW STEM AUGERS (HSA) FROM MAY 23, 30 AND 31, 2000. ROCK CORING WAS PERFORMED IN THE STRUCTURE TEST BORINGS USING A DOUBLE TUBE CORE BARREL WITH A DIAMOND BIT.

INVESTIGATIONAL FINDINGS AND OBSERVATIONS

BORING B-3 ENCOUNTERED 6 INCHES OF GRAVEL AT THE SURFACE. THE REMAINING BORINGS ENCOUNTERED 4 TO 8 INCHES OF TOPSOIL AT THE SURFACE. BELOW THE SURFACE COVER, THE BORINGS R-1 AND R-2 EXHIBITED LAYERS OF SILT, CLAYEY SILT OR SAND AND GRAVEL TO THE DRILLED DEPTHS.

BELOW THE SURFACE COVER, BORINGS B-1 THROUGH B-4 EXHIBITED ALLUVIAL DEPOSITS TO DEPTHS RANGING FROM 21.0 TO 29.5 FEET. THESE SOILS WERE DESCRIBED AS BROWN OR GRAY SILT, CLAYEY SILT, SANDY SILT, OR SILTY SAND WITH VARYING AMOUNTS OF ORGANICS.

BELOW THE ALLUVIAL DEPOSITS, BORINGS B-2, B-3 AND B-4 EXHIBITED SILTY SAND AND GRAVEL DEPOSITS TO DEPTHS RANGING FROM 36.0 TO 37.0 FEET BELOW EXISTING GRADE.

BENEATH THE SOIL OVERBURDEN, BORINGS B-1 THROUGH B-4 EXHIBITED DARK GRAY TO BLACK CLAYSHALE OR SHALE. THE RECOVERED ROCK FROM THE CORING OPERATION EXHIBITED ROCK QUALITY DESIGNATION (RQD) VALUES RANGING FROM 30 TO 47 PERCENT AND PERCENT CORE LOSS RANGING FROM 8 TO 20 PERCENT.

GROUNDWATER LEVELS WERE RECORDED IN THE TEST BORINGS DURING DRILLING AT DEPTHS RANGING FROM 8.5 TO 15.5 FEET. NO GROUNDWATER WAS ENCOUNTERED IN BORING R-2 DURING THE FIELD INVESTIGATION.

SYMBOLS OF ROCK TYPES

	Coal		Weathered Siltstone
	Fire Clay or Underclay		Siltstone
	Weathered Mudstone		Weathered Sandstone
	Mudstone		Sandstone
	Weathered Shale		Leached Dolomite
	Shale		Dolomite
	Weathered Clay-Shale		Leached Limestone
	Clay-Shale		Limestone
	Boulders or Cobbles		

LEGEND

	AUGER BORING LOCATION
	PRESS SAMPLE, DRIVE SAMPLE, AND/OR CORE BORING LOCATION
TR	TOP OF ROCK
W	INDICATES FREE WATER ELEVATION
	INDICATES STATIC WATER ELEVATION
H	HORIZONTAL BAR ON BORING INDICATES THE DEPTH THE SAMPLE WAS TAKEN - PROFILE VIEW
X/Y/Z	FIGURES BESIDE THE BORING IN PROFILE INDICATE THE NUMBER OF BLOWS FOR STANDARD PENETRATION TEST X = NUMBER OF BLOWS FOR FIRST 6 INCHES Y = NUMBER OF BLOWS FOR SECOND 6 INCHES Z = NUMBER OF BLOWS FOR THIRD 6 INCHES

SOIL LEGEND

		CLASSIFICATION
	GRAVEL AND/OR STONE FRAGMENTS	A-1-a
	GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-b
	FINE SAND	A-3
	COARSE AND FINE SAND	A-3a
	GRAVEL AND/OR STONE FRAGMENTS WITH SAND AND SILT	A-2-4 A-2-5
	GRAVEL AND/OR STONE FRAGMENTS WITH SAND, SILT AND CLAY	A-2-6 A-2-7
	SANDY SILT	A-4a
	SILT	A-4b
	ELASTIC SILT AND CLAY	A-5
	SILT AND CLAY	A-6a
	SILTY CLAY	A-6b
	ELASTIC CLAY	A-7-5
	CLAY	A-7-6
	FILL	VISUAL
	VARIOUS OTHER MATERIALS	

GENERAL INFORMATION

DRIVE SAMPLES

DRIVE SAMPLE BORINGS ARE MADE BY MEANS OF A MECHANICALLY-POWERED ROTARY-TYPE DRILL RIG, EMPLOYING A 2 INCH O.D., 1-3/8" I.D. SPLIT SPOON SAMPLING DEVICE, AT 2-1/2 AND/OR 5 FOOT DEPTH INTERVALS, DRIVEN BY MEANS OF A 140 lb. HAMMER WITH A FREE FALL OF 30 INCHES. THE NUMBER OF BLOWS REQUIRED TO DRIVE THE SAMPLING DEVICE THREE 6 INCH INCREMENTS IS CONSIDERED THE STANDARD PENETRATION TEST.

PRESS SAMPLES

PRESS SAMPLES ARE TAKEN BY MEANS OF MECHANICALLY-POWERED ROTARY-TYPE DRILLING MACHINE, EMPLOYING A 2 INCH O.D. THIN WALL PRESS SAMPLING TUBE. THE PRESS SAMPLING TUBE IS ADVANCED BY CONTINUOUS UNIFORM PRESSURE APPLIED BY THE DRILLING MACHINE.

CORE BORINGS

CORE BORINGS ARE MADE BY MEANS OF A MECHANICALLY-POWERED ROTARY-TYPE DRILLING MACHINE, EMPLOYING AN NQ CORE BARREL WITH INDUSTRIAL DIAMOND CUTTING HEAD.

SAMPLING AND TESTING

THE BORING LOG SHEETS DISPLAY A GRAPHIC PLOT OF THE INFORMATION OBTAINED, INCLUDING DEPTH AND ELEVATION OF THE SAMPLE, TYPE OF SAMPLE, THE STANDARD PENETRATION TEST READINGS IN THREE 6 INCH INCREMENTS, DEPTH AND ELEVATION OF PRESS SAMPLES, FIELD NUMBER ASSIGNED TO SAMPLE, SAMPLE DESCRIPTION-BASED ON LABORATORY TESTS UTILIZING GRADATION, PLASTICITY AND MOISTURE CONTENT DETERMINATIONS. RESULTS OF STRENGTH AND CONSOLIDATION TESTING, IF PERFORMED ON UNDISTURBED SAMPLES, WILL APPEAR GRAPHICALLY ON SEPARATE ENCLOSURES. ROCK SAMPLES ARE DISPLAYED ON THE LOG SHEETS INCLUDING DEPTH AND ELEVATION OF THE SAMPLE, AMOUNT OF RECOVERY AND A VISUAL CLASSIFICATION BASED ON TYPE, COLOR, DEGREE OF HARDNESS, GRAIN SIZE, DETERIORATION, BEDDING ACID REACTION AND OTHER QUALIFYING FACTORS.

AT DEPTH WHERE MATERIALS ARE BOULDERY OR GRAVELLY TO THE EXTENT THAT THE SAMPLER CAN NOT BE UTILIZED, A WASH SAMPLE IS PROCURED AND VISUALLY CLASSIFIED, IN ORDER TO DETERMINE THE GENERAL CHARACTERISTICS OF THE MATERIAL. THESE SAMPLES ARE NOT CONSIDERED SUFFICIENTLY REPRESENTATIVE TO WARRANT LABORATORY TESTING.

300 mm	75 mm	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		

NOTES

ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN ON THE STRUCTURE FOUNDATION INVESTIGATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE INVESTIGATIONS 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 DIRECTORS OFFICE, THE OFFICE OF MATERIALS MANAGEMENT AT 1600 WEST BROAD STREET, THE OFFICE OF ROADWAY ENGINEERING OR THE OFFICE OF STRUCTURAL ENGINEERING AT 25 SOUTH FRONT STREET, COLUMBUS, OHIO 43215.

LOG OF BORING																		
Date Started		5/23/00		Sampler: Type		SS		Dia.		1.375"		Water Elev.		592.8ft		Project Identification: Moody/Nolan Ltd., Inc.		
Date Completed		5/23/00		Casing: Length		33.0ft		Dia.		3.25"					99050275			
															SCI-73-1.23, Over Rarden Creek,			
															Scioto County, Ohio			
Boring No.		B-1		Station & Offset		27+34, 15' Rt.				Surface Elev.		608.3ft						
Elev. (ft)	Depth (ft)	Std. RQD	Pen./ RQD	Rec. (ft)	Loss (ft)	Description	Sample No.	Physical Characteristics								ODOT Class		
								% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.			
608.3																		
	0																	
607.9	2		6/5/5			TOPSOIL (4 1/2")	1								21	VIS.		
	4		3/4/5			BROWN SANDY SILT (Alluvial)	2								25	VIS.		
602.3	6		3/4/2			BROWN SILT (Alluvial)	3								25	VIS.		
600.8	8		3/2/3			BROWN & GRAY SILTY FINE SAND (Alluvial)	4								31	VIS.		
597.8	10		2/3/4			BROWN & GRAY SILTY FINE TO COARSE SAND (Alluvial)	5								56	VIS.		
595.8	12		2/2/2			BROWN & GRAY SILT (Alluvial)	6								70	VIS.		
593.3	14		4/4/2			GRAY SILTY FINE TO COARSE SAND & GRAVEL (Alluvial)	7								42	VIS.		
590.3	16		4/7/7			BROWN & GRAY SILTY FINE TO COARSE SAND & GRAVEL (Alluvial)	8								17	VIS.		
	18		6/5/6			GRAY SANDY SILT (Alluvial)	9								38	VIS.		
585.8	20		4/7/29			GRAY SANDY SILT (Alluvial)	10A								38	VIS.		
	22					DARK GRAY WEATHERED SHALE	10B								9	VIS.		
	24																	
	26																	
	28																	
578.8	30																	
	32																	
575.3	34	47%		4.4	0.6	MEDIUM DARK GRAY SHALE, FRESH TO SLIGHTLY WEATHERED	1									VIS.		
	36																	
570.3	38																	
BOTTOM OF BORING																		

LOG OF BORING																			
Date Started		5/30/00		Sampler: Type		SS		Dia.		1.375"		Water Elev.		593.5ft		Project Identification: Moody/Nolan Ltd., Inc.			
Date Completed		5/30/00		Casing: Length		38.0ft		Dia.		3.25"							99050275		
												SCI-73-1.23, Over Rarden Creek,							
												Scioto County, Ohio							
Boring No.		B-2		Station & Offset		27+87, 13.0' Lt.		Surface Elev.		608.5ft									
Elev. (ft)	Depth (ft)	Std.	Pen./ RQD	Rec. (ft)	Loss (ft)	Description	Sample No.	Physical Characteristics								ODOT Class			
								% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.				
608.5																			
	0																		
608.2	2		4/5/5			TOPSOIL (4")	1									18	VIS.		
	4		4/2/3			BROWN CLAYEY SILT (Alluvial)	2									30	VIS.		
603.5	6		3/2/4			BROWN CLAYEY SILT (Alluvial)	3									36	VIS.		
	8		2/3/3			BROWN SILTY FINE SAND (Alluvial)	4									30	VIS.		
599.5	10		3/3/3			BROWN SILT (Alluvial)	5	1	1	22	56	20	28	6	30	A-4b			
599.0	12		4/6/4			GRAY SILTY FINE SAND (Alluvial)	6									24	VIS.		
598.5	14		6/6/5			BROWN & GRAY SANDY SILT (Alluvial)	7	9	10	28	37	16	37	5	23	A-4a			
595.0	16		4/4/4			BROWN SANDY SILT (Alluvial)	8									19	VIS.		
	18		3/3/3			BROWN & GRAY SANDY & GRAVEL (Alluvial)	9	31	12	18	27	12	28	5	26	A-4a			
590.0	20		2/3/3			BROWN & GRAY SILTY FINE TO COARSE SAND & GRAVEL (Alluvial)	10	26	9	18	36	11	24	3	15	A-4a			
	22		2/4/3			BROWN & GRAY SANDY & SILT (Alluvial)	11									32	VIS.		
587.5	24		4/4/8			GRAY SILT (Alluvial)	12												
	26																		
	28																		
	30		8/10/9			BROWN & GRAY SILTY FINE TO COARSE SAND & GRAVEL	13									18	VIS.		
	32																		
	34		9/10/9			BROWN & GRAY SILTY FINE TO COARSE SAND & GRAVEL	14									18	VIS.		
573.5	36																		
572.0	38																		
570.5	40	40%		4.0	1.0	DARK GRAY WEATHERED SHALE	1										VIS.		
	42					DARK GRAY TO BLACK CLAYSHALE, THINLY BEDDED													
565.5																			
BOTTOM OF BORING																			

CTL ENGINEERING, INC.
2860 FISHER ROAD
COLUMBUS, OHIO 43204
PHONE: 614/276-8123 FAX: 614/276-6377

DATE	CALCULATED	CHECKED
18 SEPT 00		
REVIEWED		
DRAWN		

STRUCTURE FOUNDATION INVESTIGATION
SCI-73-01.23 OVER RARDEN CREEK

LOG OF BORING
Date Started 5/30/00 Sampler: Type SS Dia. 1.375" Water Elev. 593.5ft
Date Completed 5/30/00 Casing: Length 37.5ft Dia. 3.25"

Project Identification: Moody/Nolan Ltd., Inc.
99050275
SCI-73-1.23, Over Rarden Creek,
Scioto County, Ohio

Boring No. B-3 Station & Offset 28+33, 16.0' Lt. Surface Elev. 609.0ft

Elev. (ft)	Depth (ft)	Std. Pen./ RQD	Rec. (ft)	Loss (ft)	Description	Sample No.	Physical Characteristics									ODOT Class		
							% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.				
609.0	0																	
	2	4/4/4			BROWN CLAYEY SILT (Alluvial)	1										22		VIS.
	4	4/4/6			BROWN CLAYEY SILT (Alluvial)	2										23		VIS.
	6	5/5/6			BROWN CLAYEY SILT (Alluvial)	3										26		VIS.
	8	3/3/4			BROWN CLAYEY SILT (Alluvial)	4										27		VIS.
	10	2/4/4			BROWN CLAYEY SILT (Alluvial)	5										27		VIS.
596.5	12				12.5'													
	14	3/4/5			BROWN & GRAY SILTY FINE TO COARSE SAND & GRAVEL (Alluvial)	6										16		VIS.
593.5	16	4/8/6			GRAY SILT (Alluvial)	7										27		VIS.
	18	4/4/3			GRAY SILT (Alluvial)	8										31		VIS.
	20				22.0'													
587.0	22																	
	24	8/9/11			BROWN & GRAY SILTY FINE TO COARSE SAND & GRAVEL	9										17		VIS.
	26																	
	28	6/8/10			BROWN & GRAY SILTY FINE TO COARSE SAND & GRAVEL	10										18		VIS.
	30				32.0'													
577.0	32																	
	34	12/16/22			DARK BROWN SAND & GRAVEL WITH SHALE FRAGMENTS	11										15		VIS.
574.0	36				36.0'													
573.0					DARK BROWN & BLACK WEATHERED SHALE													
571.5	38				37.0'													
	40	30%	4.3	0.7	DARK BROWN & BLACK WEATHERED SHALE	1												VIS.
	42				42.5'													
566.5																		

BOTTOM OF BORING

LOG OF BORING
Date Started 5/31/00 Sampler: Type SS Dia. 1.375" Water Elev. 594.6ft
Date Completed 5/31/00 Casing: Length 38.5ft Dia. 3.25"

Project Identification: Moody/Nolan Ltd., Inc.
99050275
SCI-73-1.23, Over Rarden Creek,
Scioto County, Ohio

Boring No. B-4 Station & Offset 28+83, 16.0' Lt. Surface Elev. 610.1ft

Elev. (ft)	Depth (ft)	Std. RQD	Pen./ RQD	Rec. (ft)	Loss (ft)	Description	Sample No.	Physical Characteristics									ODOT Class	
								% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.			
610.1																		
609.4	0																	VIS.
605.6	2	5/5/5				TOPSOIL (8") BROWN SANDY SILT (Alluvial)	1									29		VIS.
	4	5/6/4				BROWN SANDY SILT (Alluvial)	2									34		VIS.
	6	2/3/2				BROWN CLAYEY SILT (Alluvial)	3									30		VIS.
603.1	8	2/4/5				BROWN SILTY FINE TO COARSE SAND & GRAVEL (Alluvial)	4									16		VIS.
	10	6/7/9				BROWN SILTY FINE TO COARSE SAND & GRAVEL (Alluvial)	5									15		VIS.
	12	5/5/7				BROWN SILTY FINE TO COARSE SAND & GRAVEL (Alluvial)	6									16		VIS.
592.6	14	5/6/7				BROWN SILTY FINE TO COARSE SAND & GRAVEL (Alluvial)	7									16		VIS.
	16	2/2/3				BROWN & GRAY SILT (Alluvial)	8									29		VIS.
	18																	
588.1	20																	
575.1	22																	
	24	7/6/7				BROWN & GRAY FINE TO COARSE SAND & GRAVEL	9									17		VIS.
	26																	
573.1	28	8/6/12				BROWN & GRAY FINE TO COARSE SAND & GRAVEL	10									15		VIS.
	30																	
	32	22/25/26				BROWN & GRAY FINE TO COARSE SAND & GRAVEL	11									15		VIS.
571.6	34																	
566.6	36																	
	38																	
	40	42%	4.6	0.4		DARK GRAY WEATHERED SHALE												
566.6	42					DARK GRAY TO BLACK SHALE, SLIGHTLY WEATHERED	1											VIS.
	44																	
	46																	

BOTTOM OF BORING

CTL ENGINEERING, INC.
2860 FISHER ROAD
COLUMBUS, OHIO 43204
PHONE: 614/276-8123 FAX: 614/276-6377

CALCULATED
DATE 18 SEPT 00
REVIEWED
DRAWN
SSC

STRUCTURE FOUNDATION INVESTIGATION
SCI-73-01.23 OVER RARDEN CREEK

SCI-73-01.10

4/5

Date Started	<u>5/30/00</u>	Sampler: Type	<u>SS</u>	Dia.	<u>1.375"</u>	Water Elev.	<u>598.7ft</u>
Date Completed	<u>5/30/00</u>	Casing: Length	<u>10.0ft</u>	Dia.	<u>3.25"</u>		

Date Started	<u>5/30/00</u>	Sampler: Type	<u>SS</u>	Dia.	<u>1.375"</u>
Date Completed	<u>5/30/00</u>	Casing: Length	<u>10.0ft</u>	Dia.	<u>3.25"</u>

Project Identification: Moody/Nolan Ltd., Inc.
99050275
SCI-73-1.23, Over Rarden Creek,
Scioto County, Ohio

Boring No. R-1 Station & Offset 26+00, Centerline Surface Elev. 607.2ft

[illegible]

Date Started	5/31/00	Sampler: Type	SS	Dia.	1.375"	Water Elev.	
Date Completed	5/31/00	Casing: Length	10.0ft	Dia.	3.25"		

Date Started	5/31/00	Sampler: Type	SS	Dia.	1.375"
Date Completed	5/31/00	Casing: Length	10.0ft	Dia.	3.25"

Project Identification: Moody/Nolan Ltd., Inc.
99050275
SCI-73-1.23, Over Rarden Creek,
Scioto County, Ohio

oring No. R-2 Station & Offset 29+55, Centerline Surface Elev. 607.6ft

[illegible]

SSC	for	18 SEPT 00	CALCULATED
			CHECKED

STRUCTURE FOUNDATION INVESTIGATION
SCI-73-01.23 OVER RARDEN CREEK

SCI-73-0110

5/5

CTL ENGINEERING, INC.
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