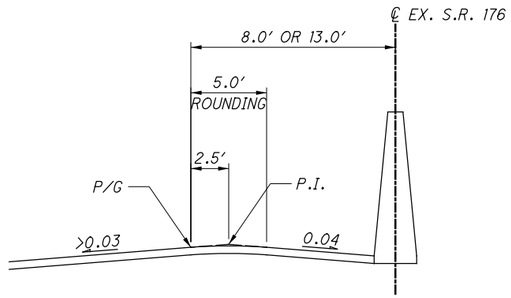
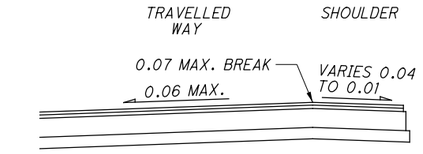
PROPOSED LEGEND

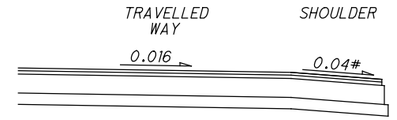
1. ITEM 202 - PAVEMENT REMOVED
2. ITEM 202 - CURB REMOVED
3. NOT USED
4. ITEM 202 - CONCRETE BARRIER REMOVED
4A. ITEM 202 - TRAFFIC ISLAND REMOVED
4B. ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN
5. ITEM 204 - EMBANKMENT
6. ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING
7. ITEM 204 - EXCAVATION OF SUBGRADE
8. ITEM 204 - GRANULAR MATERIAL, TYPE C (703.16)
9. ITEM 204 - GEOGRID (PLACED AT BOTTOM OF UNDERCUT)
10. ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (T = 3 1/4")
11. ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448) (T = VARIABLE; 1.75" MIN. TO 5" MAX.) [2 LIFTS WHEN T > 3"]
12. ITEM 252 - FULL DEPTH PAVEMENT SAWING
13. ITEM 302 - ASPHALT CONCRETE BASE, PG64-22 (T = 7 1/2") (SEE NOTE 4)
14. ITEM 304 - AGGREGATE BASE (T = 6")
14A. ITEM 304 - AGGREGATE BASE (T = 4")
15. ITEM 407 - NON-TRACKING TACK COAT
15A. ITEM 411 - STABILIZED CRUSHED AGGREGATE, AS PER PLAN (T = 4")
16. ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN (T = 3")
17. ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446) (T = 1 3/4")
18. ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447), AS PER PLAN, PG 76-22M (T = 1 1/2")
19. ITEM 452 - 12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
20. ITEM 605 - 6" UNDERDRAINS WITH GEOTEXTILE FABRIC (FOR DEPTH AND TYPE, SEE SUBGRADE STABILIZATION DETAILS ON SHEETS 23 AND 24
20A. ITEM 605 - 6" ROCK CUT UNDERDRAINS
21. ITEM 606 - GUARDRAIL, TYPE MGS
22. ITEM 609 - CURB, TYPE 4-C
22A. ITEM 452 - 4" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
23. ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)
24. ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B
25. ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B1 (SEE NOTE 3)
26. ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C
26A. ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C, AS PER PLAN
27. ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C1 (SEE NOTE 3)
28. ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D
28A. ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN
28B. ITEM 622 - PORTABLE BARRIER, 32", AS PER PLAN
29. ITEM 659 - SEEDING AND MULCHING, CLASS 2
30. ITEM 875 - LONGITUDINAL JOINT ADHESIVE [INCIDENTAL TO ITEM 442 WITH 447 ACCEPTANCE]
L. LONGITUDINAL JOINT PER SCD BP-2.1



ROUNDING ON HIGH SIDE MEDIAN SHOULDER

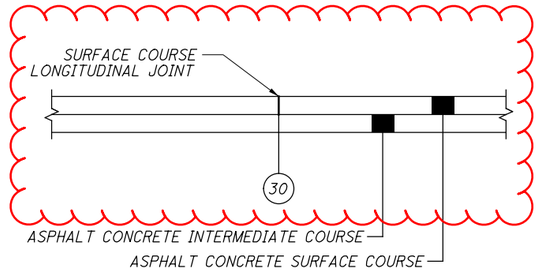


HIGH SIDE SUPERELEVATED SHOULDER DETAIL



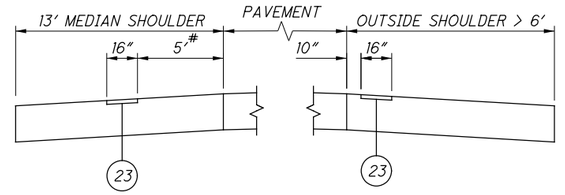
NORMAL AND LOW SIDE SUPERELEVATED SHOULDER DETAIL

OR RATE OF SUPER IF GREATER



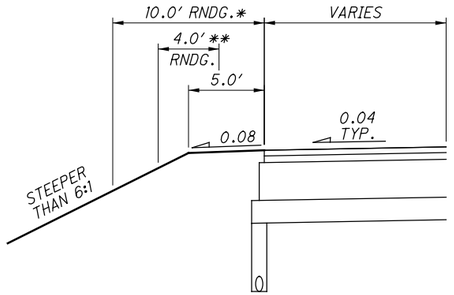
LONGITUDINAL JOINT SEALANT

[INCIDENTAL TO ITEM 442 WITH 447 ACCEPTANCE]



SHOULDER RUMBLE STRIP DETAIL

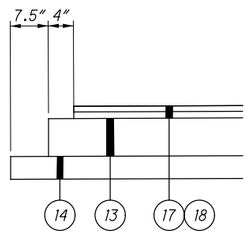
10" OFFSET FOR 8' MEDIAN SHOULDERS
(SEE STANDARD CONSTRUCTION DRAWING BP-9.1 SECTION D-D)



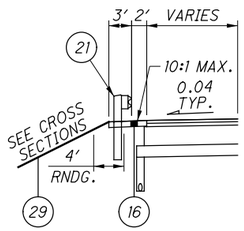
GRADED SHOULDER DETAIL

* WHEN BARRIER IS NOT INSTALLED AND THE FORESLOPE IS STEEPER THAN 6:1.

** WHEN BARRIER IS INSTALLED AND THE FORESLOPE IS STEEPER THAN 6:1



EDGE STEP DETAIL



GUARDRAIL DETAIL

SEE PLAN FOR LIMITS

NOTES:

1. FOR EXISTING LEGEND, SEE SHEET 6
2. FOR SUBGRADE STABILIZATION DETAILS, SEE SHEET 23 AND 24
3. CONCRETE BARRIER SHALL INCLUDE TWO 4" SCHEDULE 40 MULTICELL CONDUITS FOR ITS AND ONE 4" CONDUIT FOR LIGHTING (SEE LIGHTING PLANS FOR LIMITS). FOR PLACEMENT DETAILS AND ADDITIONAL REQUIREMENTS, SEE THE LIGHTING AND ITS SCDs. COST FOR CONDUIT AND NYLON PULL ROPE SHALL BE INCIDENTAL TO THE COST OF THE APPLICABLE 622 PAY ITEM.
4. ITEM 302 MAY BE PLACED IN TWO LIFTS IF THE REQUIREMENTS OF C&MS 302.04 ARE MET. AN ADDITIONAL APPLICATION OF ITEM 407, NON-TRACKING TACK COAT SHALL BE REQUIRED. REVISED EDGE COURSE DESIGN SHALL BE APPROVED BY THE ENGINEER.

PROPOSED TYPICAL SECTIONS - SR 176

CUY-176-10.13

GENERAL

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:

CITY OF CLEVELAND
DIVISION OF WATER
ATTN.: FRED ROBERTS
1201 LAKESIDE AVENUE
CLEVELAND, OH 44114
OFFICE: 216-664-2444 EXT. 5590
FRED_ROBERTS@CLEVELANDWATER.COM

CITY OF CLEVELAND
DIVISION OF WATER POLLUTION CONTROL
ATTN.: ELIE RAMY
12302 KIRBY ROAD
CLEVELAND, OH 44108
OFFICE: 216-664-2756
ERAMY@CLEVELANDWPC.COM

FIRST ENERGY CORP
ATTN.: JOHN ZASSICK
6896 MILLER ROAD
BRECKSVILLE, OH 44141
OFFICE: 440-546-8706
JMZASSICK@FIRSTENERGYCORP.COM

COLUMBIA GAS OF OHIO
ATTN.: DAN SUREN
7080 FRY ROAD
MIDDLEBURG HEIGHTS, OHIO 44130
OFFICE: 440-891-2428
DSUREN@NISOURCE.COM

NORTHEAST OHIO REGIONAL SEWER DISTRICT
ATTN.: MARY MACIEJOWSKI
3900 EUCLID AVENUE
CLEVELAND, OH 44115-2506
OFFICE: 216-881-6600 EXT. 6466
MACIEJOWSKIM@NEORSD.ORG

DOMINION ENERGY OHIO
ATTN.: KEVIN BIRT
320 SPRINGSIDE DR.,
SUITE 320
AKRON, OH 44333
OFFICE: 330-664-2409
KEVIN.J.BIRT@DOMINIONENERGY.COM
RELOCATION@DOMINIONENERGY.COM

VERIZON
ATTN.: JEFF KADUSKY
1150 WEST 3RD STREET
CLEVELAND, OH 44256
OFFICE: 330-253-8267
THOMAS.KADUSKY@VERIZON.COM

BP OIL
ATTN.: KEITH BOYLE
30 SOUTH WACKER DRIVE,
SUITE 900
CHICAGO, IL 60606
OFFICE: 312-809-4708
KEITH.BOYLE@BP.COM

AT&T
ATTN.: JAMES JANIS
13630 LORAIN AVE.
CLEVELAND, OH 44111
OFFICE: 216-476-6142
PJ8191@ATT.COM

BUCKEYE PIPELINE
ATTN.: DAVID JONES
9999 HAMILTON BOULEVARD
BREINIGSVILLE, PA 18031
OFFICE: 610-904-4409
DAJONES@BUCKEYE.COM

CHARTER COMMUNICATIONS
ATTN.: GARY NAUMANN
8179 DOW CIRCLE
STRONGSVILLE, OH 44136
OFFICE: 216-575-8016 EXT. 5033
GARY.NAUMANN1@CHARTER.COM

COX COMMUNICATIONS
ATTN.: CRAIG SMITH
12221 PLAZA DRIVE
PARMA, OH 44130
OFFICE: 216-535-3356
CRAIG.SMITH@COX.COM

CITY OF CLEVELAND
TRAFFIC ENGINEERING
ATTN.: ANDREW CROSS
601 LAKESIDE AVENUE
ROOM 25
CLEVELAND, OH 44114
OFFICE: 216-664-3197
ACROSS@CITY.CLEVELAND.OH.US

CITY OF PARMA
TRAFFIC DIVISION
ATTN.: JIM MIHELICH
6611 RIDGE ROAD
PARMA, OH 44129
OFFICE: 440-885-8111
JMIHELICH@CITYOFPARMA-OH.GOV
TRAFFICDIVISION@CITYOFPARMA-OH.GOV

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.

PAVING PROJECT PID 106394 WITHIN PROJECT LIMITS

THE PAVING PROJECT (PID 106394) WILL BE PERFORMED BEFORE AND WITHIN THE PROJECT LIMITS OF CUY-176-10.13 (PID 101941). THE CONTRACTOR IS EXPECTED TO ENCOUNTER WORK THAT WAS COMPLETED DURING THIS PROJECT. THIS MAY RESULT IN THE REMOVAL OF EXTRA OR VARYING MATERIAL (APPROXIMATE 1.5"± ASPHALT OVERLAY) TO COMPLETE CUY-176-10.13 (PID 101941) AS DETAILED IN THESE PLANS. REFER TO EXISTING TYPICAL SECTIONS FOR APPROXIMATE LIMITS OF OVERLAY. COST FOR REMOVAL OF THE ADDITIONAL MATERIAL SHALL BE CONSIDERED INCIDENTAL TO THE APPLICABLE PAVEMENT REMOVED ITEM.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 3 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD: STATIC
MONUMENT TYPE: TYPE A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 12B

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (CORS2011)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO NORTH ZONE (3401)
COMBINED SCALE FACTOR: 0.99992804
ORIGIN OF COORDINATE SYSTEM: 0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

WORK LIMITS

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

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT-OF-WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS) A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRICT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS, AS DEFINED ABOVE, WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

CLEARING AND GRUBBING

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

ITEM 204 - PROOF ROLLING

PROOF ROLLING HAS BEEN CALCULATED AS PART OF THE PROJECT OFFICE CALCULATIONS AND CARRIED TO THE GENERAL SUMMARY.

ITEM 619 - FIELD OFFICE, TYPE C, AS PER PLAN

A TYPE C FIELD OFFICE IS REQUIRED FOR THIS PROJECT. THE FOLLOWING REVISIONS TO EQUIPMENT SUPPLIED WITH THE TYPE C FIELD OFFICE, AS SPECIFIED IN TABLE 619.02-1, FIELD OFFICE, SHALL APPLY:

THE BROAD BAND INTERNET CONNECTION MUST MEET A MINIMUM DOWNLOAD SPEED OF 10MB PER SECOND AND A MINIMUM UPLOAD SPEED OF 5MB PER SECOND.

CONTRACTOR SHALL FURNISH AND SET UP A WI-FI ROUTER MEETING THE REQUIREMENTS OF IEEE 802.11ac FOR THE EXCLUSIVE USE OF THE DEPARTMENT.

ALL OTHER FIELD OFFICE ITEMS SUPPLIED SHALL MEET THE REQUIREMENTS OF A TYPE C FIELD OFFICE.

619, FIELD OFFICE, TYPE C, AS PER PLAN 22 MNTH

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COOPERATE AND COORDINATE HIS/HER OPERATIONS WITH THE CONTRACTORS ON OTHER PROJECTS THAT MAY BE IN FORCE DURING THE LIFE OF THE CONTRACT, SPECIFICALLY PID 108480, THE CUY-480/STATE ROAD AUXILIARY LANE PROJECT. NO WAIVER OF ANY PROVISIONS OF 105.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS IS INTENDED.

ROADWAY

ITEM 202 - PAVEMENT REMOVED, AS PER PLAN

REMOVAL OF EXISTING PRESSURE RELIEF JOINTS, AS IDENTIFIED IN THE PLANS, SHALL BE CONSIDERED INCIDENTAL TO THE PAVEMENT REMOVAL. BACKFILLING OF THE RESULTANT CAVITY SHALL MEET THE REQUIREMENTS OF C&MS 204, GRANULAR MATERIAL, TYPE B (703.16). LOCATIONS THAT REQUIRE SUBGRADE TREATMENT, AS DETAILED ON SHEETS 23 - 24, SHALL STILL RECEIVE THE PRESCRIBED SUBGRADE TREATMENT FOLLOWING REMOVAL OF THE EXISTING PRESSURE RELIEF JOINTS. ADDITIONAL COSTS FOR THE PRESSURE RELIEF JOINT REMOVAL AND BACKFILL SHALL BE CONSIDERED INCIDENTAL TO THE COST OF PAVEMENT REMOVAL. ALL OTHER REQUIREMENTS OF C&MS 202 SHALL STILL APPLY.

ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN (1)

PAYMENT SHALL INCLUDE THE COST TO REMOVE EXISTING RACEWAYS (ITS AND LIGHTING) AS DETAILED IN THE PLANS. ALL OTHER REQUIREMENTS OF C&MS 202 SHALL BE MET.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E (MASH)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS THAT MEET MASH REQUIREMENTS. 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 31 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, MGS TYPE E (MASH), 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.

PAVING UNDER GUARDRAIL

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING ITEM 209, RESHAPING UNDER GUARDRAIL, AS PER PLAN AND PAVING UNDER THE GUARDRAIL USING ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1 , (448), (UNDER GUARDRAIL), AS PER PLAN.

ITEM 209, RESHAPING UNDER GUARDRAIL, AS PER PLAN SHALL CONSIST OF EXCAVATING TOPSOIL,AND PLACING GRANULAR MATERIAL.

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

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

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 209, RESHAPING UNDER GUARDRAIL, AS PER PLAN.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 441 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

METHOD A:
1. SET GUARDRAIL POSTS
2. PLACE ITEM 441

METHOD B:
1. PLACE ITEM 441
2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
3. SET GUARDRAIL POSTS
4. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 441, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1(448), UNDER GUARDRAIL, AS PER PLAN.

ITEM 411 - STABILIZED CRUSHED AGGREGATE, AS PER PLAN

THIS ITEM SHALL BE PLACED BETWEEN RAMP OBE-JN AND I.R. 480 PAVEMENT FROM APPROXIMATELY STA. 100+56 TO THE CSX RAILROAD BRIDGE.

ITEM 411 - STABILIZED CRUSHED AGGREGATE, AS PER PLAN SHALL CONSIST OF EXCAVATING TOPSOIL, AGGREGATE OR OLD ASPHALT CONCRETE, PLACEMENT OF AGGREGATE, COMPACTION AND APPLYING HERBICIDE AS SPECIFIED IN THE "PAVING UNDER GUARDRAIL" NOTE.

ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 411 - STABILIZED CRUSHED AGGREGATE, AS PER PLAN.

ITEM 614 - WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL), AS PER PLAN
ITEM 622 - PORTABLE BARRIER, UNANCHORED, AS PER PLAN
ITEM 622 - PORTABLE BARRIER, "Y" CONNECTOR, AS PER PLAN

THESE ITEMS SHALL REMAIN IN PLACE AT THE END OF THE PROJECT AND BECOME THE PROPERTY OF THE DEPARTMENT. ALL OTHER REQUIREMENTS OF C&MS 622 SHALL STILL BE MET.

A+B BIDDING WITH MULTIPLE SECTIONS CONTRACT TABLE

THE CONTRACTOR WILL BID THE NUMBER OF CALENDAR DAYS TO COMPLETE EACH SEGMENT AS LISTED IN THE PROPOSAL.

CONTRACT SEGMENT - LOCATION OF CRITICAL WORK	MINIMUM DAYS	MAXIMUM DAYS	INCENTIVE/ DISINCENTIVE $ PER DAY	MAXIMUM INCENTIVE $
SEGMENT 1 COMPLETE CLOSURE OF RAMP OBW-JN FROM STA 34+60 TO 53+40 DURING PH 1/1A	7	14	$12,000	$84,000
SEGMENT 2 COMPLETE CLOSURE OF RAMP JN-OBW FROM STA 43+87 TO 63+50 DURING PH 3A	7	14	$12,000	$84,000

CALCULATED SMS
CHECKED MAW

GENERAL NOTES

CUY-176-10.13

ROADWAY CONT.

ITEM 606 - IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE TYPE 1 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE 1 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C, AS PER PLAN

A PAVED GUTTER TYPE 1-2 AS PER DM-2.1 SHALL BE CONSTRUCTED BEHIND THE CONCRETE BARRIER, SINGLE SLOPE, TYPE C AS PER RM-4.3 AT LOCATIONS SHOWN IN THE PLANS ON RAMP JN-OBE. PAYMENT FOR THE CONCRETE BARRIER AND PAVED GUTTER WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 622 CONCRETE BARRIER, SINGLE SLOPE TYPE C, AS PER PLAN, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT THE CONCRETE BARRIER AND PAVED GUTTER.

ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C, AS PER PLAN

A PAVED GUTTER TYPE 1-2 AS PER DM-2.1 SHALL BE CONSTRUCTED BEHIND THE CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C AS PER RM-4.3 AT LOCATIONS SHOWN IN THE PLANS ON RAMP JN-OBE. PAYMENT FOR THE CONCRETE BARRIER END ANCHORAGE AND PAVED GUTTER WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C, AS PER PLAN, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT THE CONCRETE BARRIER END ANCHORAGE AND PAVED GUTTER.

ITEM 614 - WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NONGATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

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

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

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

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

PAVEMENT

PART-WIDTH CONSTRUCTION

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

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447), AS PER PLAN, PG 76-22M

THE COARSE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO A BLEND OF AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO AND LIMESTONE. THE CONTRACTOR SHALL USE A MINIMUM 60% OF ACBFS OR TRAP ROCK FROM ONTARIO WITH LIMESTONE COMPRISING THE REMAINING PERCENTAGE. AT LEAST 50% OF FINE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO ACBFS OR TRAP ROCK FROM ONTARIO.

TABLE 442.02-2 APPLIES EXCEPT NO. 4 SIEVE REQUIREMENTS ARE 52 TO 60 TOTAL PERCENT PASSING. FOR THE NO. 4 SIEVE DO NOT EXCEED 63 IN PRODUCTION.

WHEN ACBFS IS USED FOR A FRACTION OF THE COARSE AGGREGATE, PROVIDE A TOTAL ASPHALT BINDER CONTENT GREATER THAN OR EQUAL TO 6.2 PERCENT. IF ACBFS MAKES UP 100% OF THE COARSE AGGREGATE, APPLY THE BINDER CONTENT REQUIREMENTS OF C&MS 442.

ASPHALT CONCRETE SURFACE COURSE SEALING REQUIREMENTS

IN ADDITION TO THE GUTTER SEALING REQUIREMENTS SPECIFIED ON SCD BP-3.1 AND IN 401.15, THE CONTRACTOR SHALL SEAL THE FOLLOWING LOCATIONS:

-ALL CASTINGS INCLUDING BUT NOT LIMITED TO MONUMENTS, MANHOLES, WATER VALVES, CATCH BASINS, CURB INLETS.
-BUTT JOINTS AND FEATHER JOINTS INCLUDING BRIDGE APPROACHES.
-BUTT JOINT BETWEEN PAVED SHOULDER AND DRIVEWAY ASPHALT AND TAPERED EDGE WHEN FEATHERING TO AN EXISTING ASPHALT DRIVEWAY.
-PERIMETER OF ALL PAVEMENT REPAIRS OR OTHER ASPHALT INLAYS WHEN PAVEMENT REPAIRS/INLAYS ARE NOT OVERLAID WITH AN ASPHALT CONCRETE SURFACE COURSE.
-ALL COLD LONGITUDINAL JOINTS BETWEEN PAVED SHOULDERS AND GUARDRAIL ASPHALT.

THE MATERIAL USED SHALL BE CERTIFIED 702.01 PG BINDER. THE WIDTH OF THE SEALER SHALL BE 2-3 INCHES.

ANY ADDITIONAL COSTS ASSOCIATED WITH THE WORK IDENTIFIED IN THIS NOTE SHALL BE INCLUDED IN THE APPROPRIATE ASPHALT CONCRETE SURFACE COURSE ITEM OF WORK.

CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. IN ALL CASES, THE PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES INCLUDING THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS IS IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS.

S.R. 176 AND BROOKPARK ROAD PAVEMENT REPAIR

THE FOLLOWING CONTINGENCY QUANTITY HAS BEEN INCLUDED FOR PAVEMENT REPAIR, AS DIRECTED BY THE ENGINEER, WITHIN AND ADJACENT TO THE S.R. 176 AND BROOKPARK ROAD INTERSECTION.

255, FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC MS 500 SY

DRAINAGE

ITEM SPECIAL - PIPE CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

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

SPECIAL, PIPE CLEANOUT, 24" AND UNDER 625 FT
SPECIAL, PIPE CLEANOUT, 27" TO 48" 70 FT

ITEM 611 - INLET NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B AND TYPE C, AS PER PLAN

THIS ITEM SHALL BE CONSISTENT WITH SPECIFICATIONS OUTLINED IN STANDARD CONSTRUCTION DRAWINGS I-2.1 AND I-2.2 AS APPLICABLE WITH EXCEPTION OF THE 4' DEPRESSED APRON WIDTH SHALL BE REDUCED TO 2' WIDTH ON THE NON-GRATE SIDE OF THE INLET.

ITEM 611 - INLET NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B, AS PER PLAN, EACH

ITEM 611 - INLET NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C, AS PER PLAN (1), EACH

ITEM 611 - INLET NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1 AND TYPE C1, AS PER PLAN

DURING PHASE 1 OF THE MAINTENANCE OF TRAFFIC PLAN (MOT), THE CONTACTOR SHALL INSTALL THE CATCH BASIN PORTION OF THE INLET PER THE APPLICABLE STANDARD CONSTRUCTION DRAWING (SCD) AND CONNECT ALL INCOMING AND OUTGOING PIPES. THE CONTRACTOR SHALL TEMPORARILY OMIT THE BARRIER PORTION OF THE INLET UNTIL PHASE 4 OF THE MOT PLAN. THE TROUGH PORTIONS OF THE INLET MAY BE CONSTRUCTED WHEN THE INLET IS INITIALLY INSTALLED OR CAN BE CONSTRUCTED JUST PRIOR TO THE BARRIER INSTALLATION AT THE OPTION OF THE CONTRACTOR.

THE TEMPORARY OPENING CREATED BY THE ABSENCE OF THE BARRIER ABOVE THE TROUGHS AND/OR THE PORTION OF THE CATCH BASIN THAT IS NOT COVERED BY THE GRATE SHALL BE COVERED BY MODIFIED FRAME AND GRATE, STEEL PLATE OR OTHER MEANS AND SHALL BE TRAFFICWORTHY. THE CONTRACTOR SHALL ENSURE THAT STORM WATER RUNOFF CAN BE COLLECTED AS INTENDED BY THE MODIFIED INLET AT ALL TIMES AND DOES NOT IMPEDED THE FLOW OF TRAFFIC.

AFTER PHASE 3A OF THE MOT PLAN, THE CONTRACTOR SHALL REMOVE ANY TEMPORARY ELEMENTS USED IN CONJUNCTION WITH THESE INLETS DURING PRIOR PHASES AND SHALL COMPLETE THE CONSTRUCTION OF THE INLETS AS SHOWN PER THE APPLICABLE SCDS.

THE CONTRACTOR SHALL SUBMIT A PLAN AND, IF NECESSARY, SHOP DRAWINGS FOR APPROVAL OF THE ENGINEER DETAILING THE METHOD TO CONTRACTOR WILL USE TO TEMPORARILY MODIFY THE INLETS SO THAT ALL OPENINGS ARE COVERED AND SAFE FOR TRAFFIC, THE INLETS COLLECT RUNOFF AS INTENDED, AND THE SUBSEQUENT MODIFICATION OF THE INLETS CONFORM TO THE APPLICABLE SCDS.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO PERFORM THE ABOVE-DESCRIBED WORK AND SHALL BE PAID AT THE CONTRACT PRICE PER EACH FOR:

ITEM 611 - INLET NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN, EACH

ITEM 611 - INLET NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN, EACH

DRAINAGE CONT.

ITEM 611 - MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN

THIS ITEM SHALL CONSIST OF REMOVING THE EXISTING MANHOLE TOP AND WALLS DOWN TO THE ELEVATION AS SHOWN ON THE PLANS AND RECONSTRUCTING THE STRUCTURE TO THE NEW GRADE AS A CB-8. A NEW GRATE AND FRAME PER SCD CB 3.3 ARE TO BE USED. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 611, MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE WORK. FOR MORE DETAILS SEE SHEET 320.

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING 15 IN DIAMETER CONDUIT AND FILLING THE AREA THUS SEALED OFF WITH ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

BULKHEADS SHALL BE LOCATED AT THE LIMITS OF THE AREA TO BE FILLED AS INDICATED ON THE PLANS. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

THE FILL MATERIAL SHALL BE PUMPED INTO PLACE, OR PLACED BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT, AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSSSECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH, SHALL BE FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF FEET (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE CRUSHED AND BACKFILLED IN ACCORDANCE WITH THE PROVISIONS OF 203, OR IT MAY BE REMOVED. THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

CALCULATED SMS CHECKED MAW

GENERAL NOTES

CUY-176-10.13

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 AS APPROVED BY THE ENGINEER:

> FOR LANE CLOSURES: DURING INITIAL SETUP 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 IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

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

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE 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.

ENSURE PROVIDED LEO'S HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

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 600 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.

WORK ZONE QUEUE DETECTION WARNING SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN AN APPROVED WORK ZONE QUEUE DETECTION WARNING SYSTEM (WZQDWS) AS PER SUPPLEMENTAL SPECIFICATION 896.

THE PROBABLE INITIAL LOCATIONS OF THE WZQDWS DEVICES ARE SHOWN ON SHEETS 64 TO 65 OF THE PLAN. IT IS EXPECTED THAT THESE LOCATIONS WILL VARY BASED ON PLANNED OR UNPLANNED PHASE AND TRAFFIC PATTERN CHANGES. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE DEVICES BY THE CONTRACTOR SHALL BE DIRECTED BY THE ENGINEER.

THE FOLLOWING TRAFFIC SENSOR THRESHOLDS AND PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) MESSAGES SHALL BE USED:

FOR IR-480 EASTBOUND:
- GREATER THAN OR EQUAL TO 50 MPH:
  - USE FOUR CORNER FLASHING CAUTION MODE
- BETWEEN 50 MPH AND 25 MPH:
  - "TRAFFIC AHEAD XX MPH" / "SLOW DOWN"
- BELOW OR EQUAL TO 25 MPH:
  - "TRAFFIC AHEAD XX MPH" / "PREPARE TO STOP"

FOR ALL OTHERS:
- GREATER THAN OR EQUAL TO 50 MPH:
  - USE FOUR CORNER FLASHING CAUTION MODE
- BETWEEN 50 MPH AND 25 MPH:
  - "I-480 W TRAFFIC XX MPH" / "SLOW DOWN"
- BELOW OR EQUAL TO 25 MPH:
  - "I-480 W TRAFFIC XX MPH" / "PREPARE TO STOP"

FOUR CORNER FLASHING CAUTION MODE SHALL CONSIST OF THE USE OF ONE ASTERISK IN EACH CORNER OF THE PCMS DISPLAY (4 TOTAL ASTERISKS).

XX SHALL BE ROUNDED UP TO THE NEAREST MULTIPLE OF 5 MPH MINUS 1. OCCUPANCY MAY BE DIRECTED TO BE USED BASED ON CERTAIN TRAFFIC CONDITIONS AND SCENARIOS. ODOT WILL DIRECT THE CONTRACTOR OF THE THRESHOLDS TO BE USED FOR THOSE AREAS WHERE OCCUPANCY IS DIRECTED TO BE USED.

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

ITEM 896, PORTABLE NON-INTRUSIVE TRAFFIC SENSOR, CLASS II
225 SIGN MONTH

(ASSUMING 15 SENSORS FOR 15 MONTHS)

ITEM 896, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
90 SIGN MONTH

(ASSUMING 6 PCMS SIGNS FOR 15 MONTHS)

WORK ZONE EGRESS WARNING SYSTEM

THE CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN AN APPROVED WORK ZONE EGRESS WARNING SYSTEM (WZEWS) AS PER SUPPLEMENTAL SPECIFICATION 829.

THE LOCATIONS OF THE WZEWS DEVICES ARE EXPECTED TO VARY BASED ON PLANNED OR UNPLANNED PHASE AND TRAFFIC PATTERN CHANGES. PLACEMENT, OPERATION, AND MAINTENANCE AND ALL ACTIVATION OF THE DEVICES BY THE CONTRACTOR SHALL BE DIRECTED BY THE ENGINEER.

WZEWS SHALL BE USED IN ACCORDANCE WITH MT-103.10. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 829, WORK ZONE EGRESS WARNING SYSTEM 60 SIGN MONTH

(ASSUMING 4 WORK ZONE EGRESS WARNING SYSTEM(S) FOR 15 MONTHS.)

WORK ZONE MARKINGS

THE FOLLOWING PAVEMENT MARKING QUANTITIES ARE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER FOR THE PURPOSE OF INSTALLING PAVEMENT MARKINGS ON THE COMPLETED INTERMEDIATE COURSE PAVEMENT AND HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614, WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT
1.45 MILE

ITEM 614, WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT
10.45 MILE

ITEM 614, WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT
8597 FT

ITEM 614, WORK ZONE DOTTED LINE, CLASS I, 642 PAINT
5431 FT

THE FOLLOWING PAVEMENT MARKING QUANTITIES ARE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER FOR THE PURPOSE OF INSTALLING CLASS III PAVEMENT MARKINGS ON THE COMPLETED SURFACE COURSE PAVEMENT AND HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614, WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT
1.45 MILE

ITEM 614, WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT
10.45 MILE

ITEM 614, WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT
8597 FT

CALCULATED BNC
CHECKED JMS

MAINTENANCE OF TRAFFIC GENERAL NOTES

CUY-176-10.13

MAINTENANCE OF TRAFFIC SUBSUMMARY

CALCULATED BNC
CHECKED JMS

SHEET NO.	REF. NO.	PHASE	LOCATION		614 WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL)	614 WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (BIDIRECTIONAL)	614 WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	614 WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	614 WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT	614 WORK ZONE DOTTED LINE, CLASS I, 642 PAINT	614 WORK ZONE CENTER LINE, CLASS I, 642 PAINT	614 WORK ZONE STOP LINE, CLASS I, 642 PAINT	614 WORK ZONE GORE MARKING, CLASS II	614 WORK ZONE ARROW, CLASS I, 642 PAINT	614 WORK ZONE ISLAND MARKING, CLASS I	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	622 PORTABLE BARRIER, UNANCHORED	622 PORTABLE BARRIER, 50", AS PER PLAN	622 PORTABLE BARRIER, "Y" CONNECTOR	614 BARRIER REFLECTOR, TYPE I, ONE WAY	614 WORK ZONE RAISED PAVEMENT MARKER	614 OBJECT MARKER, ONE WAY	614 WORK ZONE CROSSOVER LIGHTING SYSTEM
			FROM	TO	EACH	EACH	MILE	MILE	FT	FT	MILE	FT	FT	EACH	SF	SY	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH
			S.R. 176																					
77,-79	ELW-1	PRE-1	104+40	120+70				0.31																
77,-79	ELY-1	PRE-1	104+40	120+70				0.31														20		
77,-79	ELW-2	PRE-1	104+40	117+10				0.24																
77,-79	ELY-2	PRE-1	104+40	117+10				0.24														16		
77,-79	TP-1	PRE-1	110+96	113+02	1											266								
77,-79	PCB-1	PRE-1	110+96	113+02														206			31		10	
77,-79	TP-4	PRE-1	134+00	137+00												581								
79	LIGHTING	PRE-1	134+00	142+00																				1
77,-79	PCB-2	PRE-1	132+47	137+30														483			64		21	
			RAMP OBW-JN																					
78	TP-8	PRE-1	50+42	56+91												604								
PRE-PHASE 1 SUBTOTAL					1			1.10								1451		689			95	36	31	1
			S.R. 176																					
80,85	ELW-2	1	93+70	151+60				1.10														72		
80,85	ELY-2	1	93+70	151+60				1.10														72		
80,83	ELW-1	1	95+25	122+65				0.52																
80,85	ELY-1	1	95+25	145+80				0.96														63		
80,85	IA-1, PCB-2	1	98+78	112+31	1												1353				84		28	
80,82	PCB-1	1	99+00	111+50													1250				78		26	
82,85	PCB-1	1	111+50	137+30														2580			316		105	
82,83	CH-6	1	118+43	121+83					340															
82,85	PCB-3	1	110+66	148+00													3734						76	
82,83	TP-2	1	112+73	122+65												350								
83,85	CH-1	1	127+48	130+18					270													14		
83,85	CH-1	1	130+18	148+80					1862													93		
80	CH-2, GM-1	1	122+65	127+48					483				80									12		
83	CH-3	1	122+65	127+48					483													12		
83,85	CH-4	1	127+48	130+18					270													2		
83,85	CH-4	1	130+18	148+80					3724													93		
83,85	ELW-3	1	127+48	130+18				0.05																
83,85	ELW-3	1	130+18	138+65				0.16														42		
83,-84	TP-3	1	127+70	135+15												185							16	
81-82	DL-1	1	138+65	145+80						715														
82,83	ELY-4	1	118+43	129+47				0.21																
83,84	ELY-4	1	129+47	141+70				0.23														61		
84,85	ELY-4	1	141+70	148+00				0.12																
82,83	CH-6	1	118+48	121+83					335													8		
SUBTOTAL (CARRIED TO SHEET 35)					1			4.45	7767	715			80			535	6337	2580			478	544	251	

CUY-176-10.13

SHEET NO.	REF. NO.	PHASE	LOCATION		614 WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL)	614 WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (BIDIRECTIONAL)	614 WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	614 WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	614 WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT	614 WORK ZONE DOTTED LINE, CLASS I, 642 PAINT	614 WORK ZONE CENTER LINE, CLASS I, 642 PAINT	614 WORK ZONE STOP LINE, CLASS I, 642 PAINT	614 WORK ZONE GORE MARKING, CLASS II	614 WORK ZONE ARROW, CLASS I, 642 PAINT	614 WORK ZONE ISLAND MARKING, CLASS I	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	622 PORTABLE BARRIER, UNANCHORED	622 PORTABLE BARRIER, 50", AS PER PLAN	622 PORTABLE BARRIER, "Y" CONNECTOR	614 BARRIER REFLECTOR, TYPE 1, ONE WAY	614 WORK ZONE RAISED PAVEMENT MARKER	614 OBJECT MARKER, ONE WAY	614 WORK ZONE CROSSOVER LIGHTING SYSTEM
			FROM	TO	EACH	EACH	MILE	MILE	FT	FT	MILE	FT	FT	EACH	SF	SY	FT	FT	EACH	EACH	EACH	EACH	EACH
			RAMP GE-1																				
109	PCB-7	3	50+45	54+00													355			24		8	
			RAMP GE-2																				
108	ELW-8	3	30+26	33+29				0.06															
108	ELY-5	3	30+32	33+29				0.06													4		
			RAMP JN-OBW																				
104-105	CH-2, ELY-3, ELW-5	3	38+00	40+41				0.09	241												36		
105	ELW-5	3	40+41	44+12				0.07															
104	PCB-5, IA-2	3	39+64	43+87	1												423		1	28		9	
104	PCB-9	3	39+64	44+30													466			31		10	
104	ELW-9	3	44+12	45+30				0.02															
104	ELY-9	3	40+41	45+30				0.09															
			BROOKPARK ROAD																				
102	ELW-1	3	101+16	103+13				0.04															
102	DY-1, LL-1, CH-8	3	102+30	102+77			0.01		47		0.01												
102	SL-1, DL-1	3	102+77	103+64 (S.R. 176)						226		33											
102	ELW-2, DL-5	3	104+07	105+37				0.02		130													
SUBTOTAL (THIS SHEET)					1		0.01	0.45	288	356	0.01	33					1244		1	83	40	27	
SUBTOTAL (CARRIED FROM SHEET 40)					2			6.98	4238	3624		11			7		5025	2649		646	523	215	
PHASE 3 SUBTOTAL					3		0.01	7.43	4526	3980	0.01	44			7		6269	2649	1	729	563	242	

CALCULATED BNC
CHECKED JMS

MAINTENANCE OF TRAFFIC SUBSUMMARY

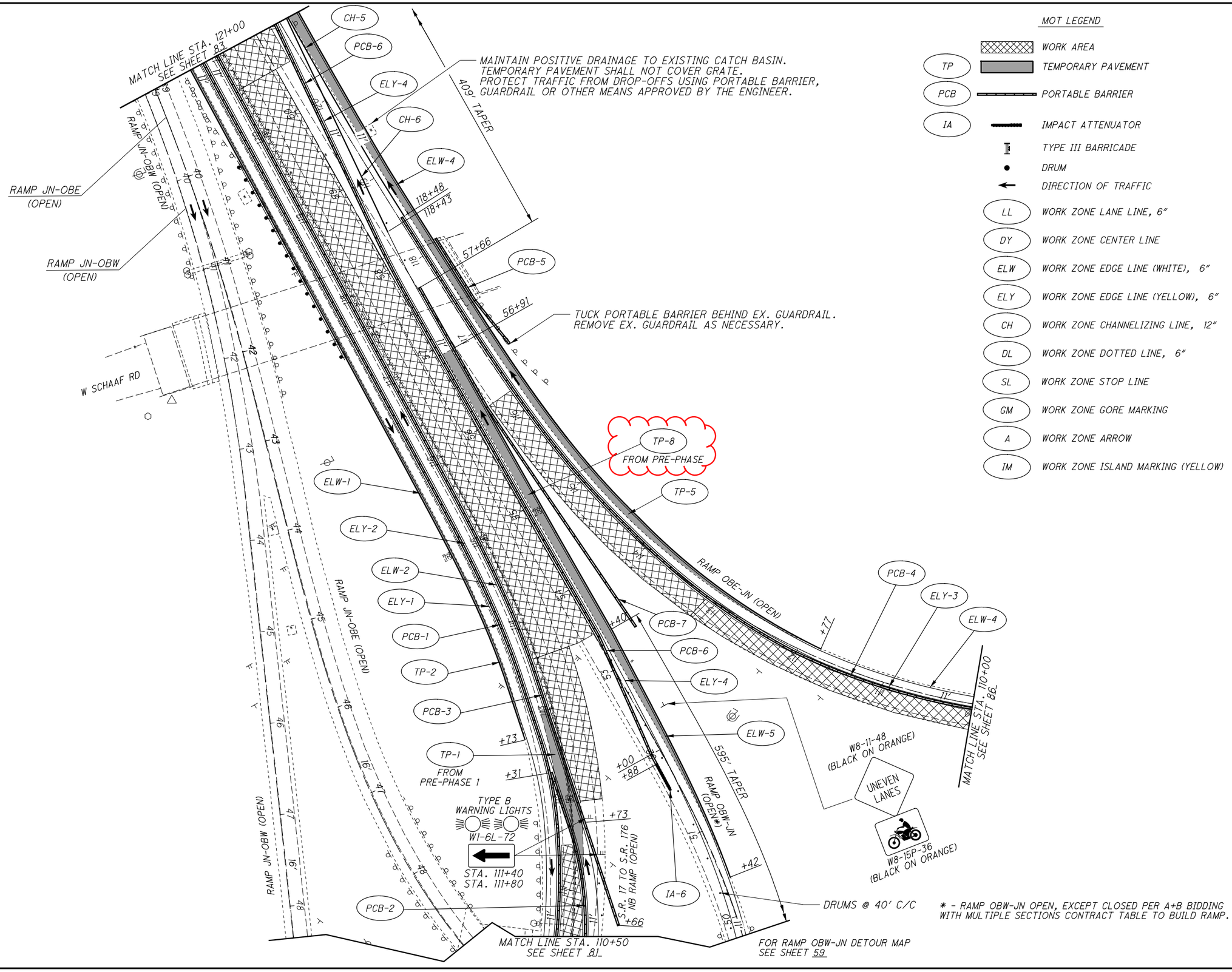
CUY-176-10.13

SHEET NO.	REF. NO.	PHASE	LOCATION		614	614	614	614	614	614	614	614	614	614	614	615	622	622	622	614	614	614	614
					WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL)	WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (BIDIRECTIONAL)	WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT	WORK ZONE DOTTED LINE, CLASS I, 642 PAINT	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	WORK ZONE GORE MARKING, CLASS II	WORK ZONE ARROW, CLASS I, 642 PAINT	WORK ZONE ISLAND MARKING, CLASS I	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	PORTABLE BARRIER, UNANCHORED	PORTABLE BARRIER, 50", AS PER PLAN	PORTABLE BARRIER, "Y" CONNECTOR	BARRIER REFLECTOR, TYPE I, ONE WAY	WORK ZONE RAISED PAVEMENT MARKER	OBJECT MARKER, ONE WAY	WORK ZONE CROSSOVER LIGHTING SYSTEM
			FROM	TO	EACH	EACH	MILE	MILE	FT	FT	MILE	FT	FT	EACH	SF	SY	FT	FT	EACH	EACH	EACH	EACH	EACH
			S.R. 176																				
123	ELY-1	4A	93+70	117+69				0.45													30		
123	ELW-1	4A	93+70	113+44				0.37															
123	CH-1	4A	113+44	117+69					425												11		
123	CH-2	4A	113+58	117+69					411												10		
123-124	CH-3	4A	114+70	124+35					965												24		
123-124	LL-1, ELY-1	4A	117+69	121+50			0.07	0.07													3		
123-124	CH-6	4A	117+77	124+35					658												16		
123	PCB-1, IA-1	4A	120+14	136+99	1												1685			104		35	
124-125	CH-4, ELY-1	4A	121+50	139+88				0.35	1838												184		
124-125	ELW-2	4A	122+35	139+88				0.33													88		
124-125	CH-5	4A	124+35	139+88					1553												78		
PHASE 4A SUBTOTAL					1		0.07	1.57	5850								1685			104	444	35	
PRE-PHASE 1 SUBTOTAL (CARRIED FROM SHEET 33)					1			1.10								1451		689		95	36	31	1
PHASE 1 SUBTOTAL (CARRIED FROM SHEET 35)					6		4.16	12.70	22997	1993			80			5413	23429	2580		1530	1905	602	
PHASE 1A SUBTOTAL (CARRIED FROM SHEET 36)					1		0.19	1.37	3529								1754			118	290	39	
PHASE 2 SUBTOTAL (CARRIED FROM SHEET 39)					4		2.30	10.09	7153	1780		60		2	14	109	17167	4505	2	1616	802	540	
PHASE 3 SUBTOTAL (CARRIED FROM SHEET 41)					3		0.01	7.43	4526	3980	0.01	44			7		6269	2649	1	729	563	242	
PHASE 3A SUBTOTAL (CARRIED FROM SHEET 42)					1			1.40	2195								868			58	55	19	
PHASE 4 SUBTOTAL (CARRIED FROM SHEET 43)					2		0.76	2.11	3496	860			789				4170	92		273	238	91	
PHASE 4A SUBTOTAL (THIS SHEET)					1		0.07	1.57	5850								1685			104	444	35	
TOTAL CARRIED TO GENERAL SUMMARY					19		7.49	37.77	49746	8613	0.01	104	869	2	21	6973	55342	10515	3	4523	4333	1599	1

CALCULATED BNC
CHECKED JMS

SUMMARY OF TRAFFIC MAINTENANCE

CUY-176-10.13



MOT LEGEND

- WORK AREA
- TP — TEMPORARY PAVEMENT
- PCB — PORTABLE BARRIER
- IA — IMPACT ATTENUATOR
- TYPE III BARRICADE
- DRUM
- DIRECTION OF TRAFFIC
- LL — WORK ZONE LANE LINE, 6"
- DY — WORK ZONE CENTER LINE
- ELW — WORK ZONE EDGE LINE (WHITE), 6"
- ELY — WORK ZONE EDGE LINE (YELLOW), 6"
- CH — WORK ZONE CHANNELIZING LINE, 12"
- DL — WORK ZONE DOTTED LINE, 6"
- SL — WORK ZONE STOP LINE
- GM — WORK ZONE GORE MARKING
- A — WORK ZONE ARROW
- IM — WORK ZONE ISLAND MARKING (YELLOW)

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED R.J.J
CHECKED J.M.S

MAINTENANCE OF TRAFFIC PHASE 1

CUY-176-10.13

OFFICE CALCS	20 - 22	25 - 31	44	136	137	138	139	140	143	144	145	147	148	149	322	326	327	330	344	355	360	362	01/NHS/PV	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
																												ROADWAY	
																							LS	201	11000	LS		CLEARING AND GRUBBING	20
													90382										90382	202	23001	90382	SY	PAVEMENT REMOVED, AS PER PLAN	20
													1121										1121	202	30000	1121	SF	WALK REMOVED	
						237																	237	202	30700	237	FT	CONCRETE BARRIER REMOVED	
						3606																	3606	202	30701	3606	FT	CONCRETE BARRIER REMOVED, AS PER PLAN (1)	20
															475								475	202	30701	475	FT	CONCRETE BARRIER REMOVED, AS PER PLAN (2)	322
													1589										1589	202	30800	1589	SY	TRAFFIC ISLAND REMOVED	
													1552										1552	202	32000	1552	FT	CURB REMOVED	
																	466						466	202	32800	466	SY	CONCRETE SLOPE PROTECTION REMOVED	
				668																			668	202	35100	668	FT	PIPE REMOVED, 24" AND UNDER	
						8095																	8095	202	38000	8095	FT	GUARDRAIL REMOVED	
						12																	12	202	42010	12	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E	
						18																	18	202	42040	18	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
						16																	16	202	47000	16	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
						2																	2	202	47800	2	EACH	IMPACT ATTENUATOR REMOVED	
				6																			6	202	58100	6	EACH	CATCH BASIN REMOVED	
				6																			6	202	58200	6	EACH	INLET REMOVED	
					14																		14	202	62000	14	EACH	JUNCTION BOX REMOVED	
				110																			110	SPECIAL	20270000	110	FT	FILL AND PLUG EXISTING CONDUIT	21
	625																						625	SPECIAL	20270110	625	FT	PIPE CLEANOUT, 24" AND UNDER	21
	70																						70	SPECIAL	20270120	70	FT	PIPE CLEANOUT, 27" TO 48"	21
										19075													19075	203	10000	19075	CY	EXCAVATION	
2212										1063													3275	203	20000	3275	CY	EMBANKMENT	
119912																							119912	204	10000	119912	SY	SUBGRADE COMPACTION	23
46461																							46461	204	13000	46461	CY	EXCAVATION OF SUBGRADE	
34901																							34901	204	20000	34901	CY	EMBANKMENT	
9348																							9348	204	30020	9348	CY	GRANULAR MATERIAL, TYPE C (703.16)	
60																							60	204	45000	60	HOUR	PROOF ROLLING	23
24074																							24074	204	51000	24074	SY	GEOGRID	
							105																105	209	15001	105	STA	RESHAPING UNDER GUARDRAIL, AS PER PLAN	20
																	466						466	601	21001	466	SY	CONCRETE SLOPE PROTECTION, AS PER PLAN	327
							8794																8794	606	15050	8794	FT	GUARDRAIL, TYPE MGS	
							37.5																37.5	606	15150	37.5	FT	GUARDRAIL, TYPE MGS HALF POST SPACING	
							412.5																412.5	606	15550	412.5	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS	
							14																14	606	26150	14	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH)	20
							15																15	606	26550	15	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
							11																11	606	35002	11	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
							8																8	606	35102	8	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
							1																1	606	60002	1	EACH	IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL)	21
1058																							1058	608	10000	1058	SF	4" CONCRETE WALK	
281																							281	608	52000	281	SF	CURB RAMP	
							819																819	622	10060	819	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B	
							154																154	622	10061	154	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B, AS PER PLAN	323
							1282																1282	622	10100	1282	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	
							321																321	622	10120	321	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C	
							510																510	622	10121	510	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C, AS PER PLAN	21
							1928																1928	622	10140	1928	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	
							216																216	622	10160	216	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
															447								447	622	10161	447	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN	322
							3																3	622	25000	3	EACH	CONCRETE BARRIER END SECTION, TYPE D	
							2																2	622	25001	2	EACH	CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN (1)	324
															2								2	622	25001	2	EACH	CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN (2)	322
							11																11	622	25004	11	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B	
							2																2	622	25005	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B, AS PER PLAN	323
							8																8	622	25006	8	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1	
							10																10	622	25008	10	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C	

CALCULATED MJT
CHECKED NSP

GENERAL SUMMARY

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OFFICE CALCS	20 - 22	25 - 31	44	136	137	138	139	140	143	144	145	147	148	149	322	326	327	330	344	355	360	362	01/NHS/PV	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
																												ROADWAY (CONT.)	
							2																2	622	25009	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C, AS PER PLAN	21
							6																6	622	25014	6	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1	
							1																1	622	25050	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
							1220																1220	622	41101	1220	FT	PORTABLE BARRIER, UNANCHORED, AS PER PLAN	20
							1																1	622	41051	1	EACH	PORTABLE BARRIER, "Y" CONNECTOR, AS PER PLAN	20
																												EROSION CONTROL	
									10														10	601	21050	10	SY	TIED CONCRETE BLOCK MAT, TYPE 1	
											173												173	601	21060	173	SY	TIED CONCRETE BLOCK MAT, TYPE 2	
	2																						2	659	00100	2	EACH	SOIL ANALYSIS TEST	
	3289													853									4142	659	00300	4142	CY	TOPSOIL	
										29635													29635	659	00510	29635	SY	SEEDING AND MULCHING, CLASS 2	
	1482																						1482	659	14000	1482	SY	REPAIR SEEDING AND MULCHING	
	1482																						1482	659	15000	1482	SY	INTER-SEEDING	
	4.13																						4.13	659	20000	4.13	TON	COMMERCIAL FERTILIZER	
	6.12																						6.12	659	31000	6.12	ACRE	LIME	
	164																						164	659	35000	164	MGAL	WATER	
														7678									7678	670	00500	7678	SY	SLOPE EROSION PROTECTION	
											106												106	670	00700	106	SY	DITCH EROSION PROTECTION	
														LS									LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
																							LS	832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
																							LS	832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
														130000									130000	832	30000	130000	EACH	EROSION CONTROL	
																												DRAINAGE	
				0.5																			0.5	602	20000	0.5	CY	CONCRETE MASONRY	
									10071														10071	605	11110	10071	FT	6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
									8746														8746	605	12210	8746	FT	6" DEEP PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
									456														456	605	13410	456	FT	6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
									15258														15258	605	13510	15258	FT	6" ROCK CUT UNDERDRAINS WITH GEOTEXTILE FABRIC	
									23027														23027	605	14020	23027	FT	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
									1676														1676	611	00510	1676	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
				5																			5	611	04600	5	FT	12" CONDUIT, TYPE C	
				1021																			1021	611	05900	1021	FT	15" CONDUIT, TYPE B	
				121																			121	611	05900	121	FT	15" CONDUIT, TYPE B, 706.02	
				196																			196	611	06100	196	FT	15" CONDUIT, TYPE C	
				10																			10	611	06100	10	FT	15" CONDUIT, TYPE C, 706.02	
				114																			114	611	06700	114	FT	15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21	
				15																			15	611	07400	15	FT	18" CONDUIT, TYPE B, 706.02	
				15																			15	611	10400	15	FT	24" CONDUIT, TYPE B, 706.02	
				1																			1	611	98150	1	EACH	CATCH BASIN, NO. 3	
				3																			3	611	98180	3	EACH	CATCH BASIN, NO. 3A	
				1																			1	611	98230	1	EACH	CATCH BASIN, NO. 4	
				6																			6	611	98370	6	EACH	CATCH BASIN, NO. 6	
				2																			2	611	98410	2	EACH	CATCH BASIN, NO. 8	
				3																			3	611	98840	3	EACH	INLET, NO. 2-A-6	
				1																			1	611	99094	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B	
				4																			4	611	99095	4	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B, AS PER PLAN	21
				1																			1	611	99101	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B1, AS PER PLAN	21
				6																			6	611	99105	6	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C, AS PER PLAN (1)	21
				4																			4	611	99105	4	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C, AS PER PLAN (2)	320
				2																			2	611	99111	2	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1, AS PER PLAN	21
				2																			2	611	99574	2	EACH	MANHOLE, NO. 3	
				1																			1	611	99661	1	EACH	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN	21
									5														5	611	99710	5	EACH	PRECAST REINFORCED CONCRETE OUTLET	
				902																			902	839	30000	902	FT	TRENCH DRAIN WITH STANDARD GRATE	
																												PAVEMENT	
7092																							7092	252	01500	7092	FT	FULL DEPTH PAVEMENT SAWING	
												1465											1465	254	01000	1465	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T = 3 1/4")	
		28100																					28100	254	01000	28100	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T = 1 1/2")	
	500																						500	255	10160	500	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC MS	
19166																							19166	302	46000	19166	CY	ASPHALT CONCRETE BASE, PG64-22	
15808																							15808	304	20000	15808	CY	AGGREGATE BASE	

CALCULATED MJT
CHECKED NSP

GENERAL SUMMARY

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OFFICE CALCS	20 - 22	25 - 31	44	136	137	138	139	140	143	144	145	147	148	149	322	326	327	330	344	355	360	362	01/NHS/PV	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
																												PAVEMENT (CONT.)	
9909		1405										267											11581	407	20000	11581	GAL	NON-TRACKING TACK COAT	
								159															159	411	10001	159	CY	STABILIZED CRUSHED AGGREGATE, AS PER PLAN	20
								447															447	441	50701	447	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN	20
4421																							4421	442	10100	4421	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	
3717		1100										63											4880	442	10301	4880	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN, PG 76-22M	21
												104											104	442	20200	104	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)	
571																							571	452	09010	571	SY	4" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
560																							560	452	15010	560	SY	12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
174																							174	609	14000	174	FT	CURB, TYPE 2-A	
898																							898	609	24510	898	FT	CURB, TYPE 4-C	
185																							185	609	26000	185	FT	CURB, TYPE 6	
2.31		1.76																					4.07	618	40600	4.07	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
																												LIGHTING	
																						7	7	625	00450	7	EACH	CONNECTION, FUSED PULL APART	
																						7	7	625	00460	7	EACH	CONNECTION, UNFUSED PULL APART	
																						2	2	625	00480	2	EACH	CONNECTION, UNFUSED PERMANENT	
																						28	28	625	10620	28	EACH	LIGHT POLE ANCHOR BOLTS, MISC.: MEDIAN MOUNTED LIGHT POLE	361
																						7	7	625	14306	7	EACH	MEDIAN LIGHT POLE FOUNDATION, 10' DEEP	
																						1652	1652	625	22910	1652	FT	NO. 2/0 AWG 2400 VOLT DISTRIBUTION CABLE	
																						1118	1118	625	23308	1118	FT	DISTRIBUTION CABLE, MISC.: NO. 4/0 AWG 2400 VOLT DISTRIBUTION CABLE	
																						7	7	625	32000	7	EACH	GROUND ROD	
																						7	7	625	35011	7	EACH	REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN	361
																						LS	LS	SPECIAL	62540000	LS		MAINTAIN EXISTING LIGHTING	361
																						7	7	625	75500	7	EACH	LIGHT POLE FOUNDATION REMOVED	
																						1	1	625	75800	1	EACH	DISCONNECT CIRCUIT	
																												TRAFFIC SURVEILLANCE	
					700																		700	625	25752	700	FT	CONDUIT, 4", MULTICELL, 725.20, EPC-80, FOR TRAFFIC SURVEILLANCE	22
					350																		350	625	29010	350	FT	TRENCH, 30" DEEP	
					14																		14	625	29931	14	EACH	MEDIAN JUNCTION BOX, AS PER PLAN	22
					6																		6	625	30710	6	EACH	PULL BOX, 725.08, 32"	
					6																		6	625	31510	6	EACH	PULL BOX REMOVED	
																												TRAFFIC CONTROL	
																		400					400	614	11631	400	FT	INCREASED BARRIER DELINEATION, AS PER PLAN	330
																			415				415	621	00100	415	EACH	RPM	
																			295				295	621	00300	295	EACH	RPM REFLECTOR	
																			587				587	621	54000	587	EACH	RAISED PAVEMENT MARKER REMOVED	
																				3			3	625	32000	3	EACH	GROUND ROD	
							144																144	626	00102	144	EACH	BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL	
								3															3	626	00112	3	EACH	BARRIER REFLECTOR, TYPE 3, ONE WAY	
								195															195	626	00112	195	EACH	BARRIER REFLECTOR, TYPE 3, BI-DIRECTIONAL	
																				326.6			326.6	630	03100	326.6	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
																				35.2			35.2	630	06500	35.2	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W6X9	
																				41.9			41.9	630	07600	41.9	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12	
																				32.0			32.0	630	08004	32.0	FT	ONE WAY SUPPORT, NO. 3 POST	
																				127.7			127.7	630	08300	127.7	FT	GROUND MOUNTED WOODEN BOX BEAM SUPPORT, TYPE L BEAM	
																				39			39	630	08600	39	EACH	SIGN POST REFLECTOR	
																				4			4	630	09000	4	EACH	BREAKAWAY STRUCTURAL BEAM CONNECTION	
																				1			1	630	20800	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 8	
																				1			1	630	45500	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8	
																				1			1	630	55000	1	EACH	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TC-7.65	
																				1			1	630	79101	1	EACH	SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN	329
																				18			18	630	79600	18	EACH	SIGN SUPPORT ASSEMBLY, BRIDGE MOUNTED, TYPE 1	
																				399.0			399.0	630	80100	399.0	SF	SIGN, FLAT SHEET	
																				13.4			13.4	630	80101	13.4	SF	SIGN, FLAT SHEET, AS PER PLAN	328
																				48.0			48.0	630	80200	48.0	SF	SIGN, GROUND MOUNTED EXTRUSHEET	

CALCULATED MJT
CHECKED NSP

GENERAL SUMMARY

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OFFICE CALCS	20 - 22	25 - 31	44	136	137	138	139	140	143	144	145	147	148	149	322	326	327	330	344	355	360	362	01/NHS/PV	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
																												TRAFFIC CONTROL (CONT.)	
																				31.7			31.7	630	80401	31.7	SF	SIGN, PERMANENT OVERLAY, AS PER PLAN	328
																				1			1	630	81020	1	EACH	CONCRETE MEDIAN BARRIER SIGN BRACKET	
																				4			4	630	84500	4	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	
																				2			2	630	84510	2	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	
																				12			12	630	84900	12	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
																				5			5	630	85100	5	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
																				3			3	630	85600	3	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION	
																				17			17	630	86002	17	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
																				4			4	630	86102	4	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL	
																				5			5	630	86292	5	EACH	REMOVAL OF GROUND MOUNTED WOODEN BOX BEAM SUPPORT AND DISPOSAL	
																				18			18	630	86310	18	EACH	REMOVAL OF STRUCTURE MOUNTED SIGN AND DISPOSAL	
																				7			7	630	87100	7	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	
																				1			1	630	87520	1	EACH	REMOVAL OF POLE MOUNTED SIGN AND REERECTION	
																				18			18	630	89702	18	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL	
																				1			1	630	89706	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30	
																				1			1	630	89802	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65	
																			13.68				13.68	646	10010	13.68	MILE	EDGE LINE, 6"	
																			6.63				6.63	646	10110	6.63	MILE	LANE LINE, 6"	
																			0.92				0.92	646	10111	0.92	MILE	LANE LINE, 6", AS PER PLAN	330
																			8597				8597	646	10310	8597	FT	CHANNELIZING LINE, 12"	
																			67				67	646	10400	67	FT	STOP LINE	
																			313				313	646	10500	313	FT	CROSSWALK LINE	
																			894				894	646	10600	894	FT	TRANSVERSE/DIAGONAL LINE	
																			308				308	646	10620	308	FT	CHEVRON MARKING	
																			162				162	646	10800	162	SF	ISLAND MARKING	
																			6				6	646	20300	6	EACH	LANE ARROW	
																			2				2	646	20320	2	EACH	WRONG WAY ARROW	
																			3				3	646	20350	3	EACH	LANE REDUCTION ARROW	
																			1				1	646	20410	1	EACH	WORD ON PAVEMENT, 96" "MERGE"	
																			97				97	646	20504	97	FT	DOTTED LINE, 6" YELLOW 2' LINE 6' GAP	
																			4166				4166	646	20504	4166	FT	DOTTED LINE, 6" 3' LINE 9' GAP	
																			1265				1265	646	20510	1265	FT	DOTTED LINE, 12" 3' LINE 9' GAP	
																			6				6	646	50000	6	EACH	REMOVAL OF PAVEMENT MARKING	
																			729				729	646	50100	729	FT	REMOVAL OF PAVEMENT MARKING	
																												TRAFFIC SIGNALS	
																					156		156	625	25400	156	FT	CONDUIT, 2", 725.04	
																					111		111	625	25500	111	FT	CONDUIT, 3", 725.04	
																					396		396	625	25600	396	FT	CONDUIT, 4", 725.04	
																					339		339	625	29000	339	FT	TRENCH	
																					101		101	625	29600	101	FT	TRENCH IN PAVED AREA, TYPE B	
																					3		3	625	30700	3	EACH	PULL BOX, 725.08, 18"	
																					1		1	625	30706	1	EACH	PULL BOX, 725.08, 24"	
																					8		8	625	32000	8	EACH	GROUND ROD	
					350																440		790	625	36000	790	FT	PLASTIC CAUTION TAPE	
																					1		1	625	76000	1	EACH	ARC FLASH CALCULATIONS AND LABEL(BROOKPARK RD. AND SR 176 RAMPS)	328
																					5		5	632	05007	5	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	329
																					4		4	632	05087	4	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	329
																					6		6	632	20731	6	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	329
																					9		9	632	25000	9	EACH	COVERING OF VEHICULAR SIGNAL HEAD	329
																					6		6	632	25010	6	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
																					6		6	632	26000	6	EACH	PEDESTRIAN PUSHBUTTON	
																					304		304	632	40500	304	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
																					1626		1626	632	40700	1626	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
																					2		2	632	64010	2	EACH	SIGNAL SUPPORT FOUNDATION	328
																					5		5	632	64020	5	EACH	PEDESTAL FOUNDATION	
																					47		47	632	68200	47	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG	
																					25		25	632	69800	25	FT	SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG	
																					1		1	632	70000	1	EACH	POWER SERVICE	
																					1		1	632	75122	1	EACH	SIGNAL SUPPORT, TYPE TC-12.30 DESIGN 5 POLE, WITH MAST ARMS TC-81.21 DESIGN 4 AND DESIGN 4	

CALCULATED MJT
CHECKED NSP

GENERAL SUMMARY

CUY-176-10.13

OFFICE CALCS	20 - 22	25 - 31	44	136	137	138	139	140	143	144	145	147	148	149	322	326	327	330	344	355	360	362	01/NHS/PV	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
																												TRAFFIC SIGNALS (CONT.)	
																					1		1	632	80602	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 12	
																					3		3	632	89600	3	EACH	PEDESTAL, 8'	
																					2		2	632	90008	2	EACH	PEDESTAL, 15', TRANSFORMER BASE	
																					1		1	632	90101	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	329
																					1		1	809	69123	1	EACH	ATC V6.24 CONTROLLER, AS PER PLAN	329
																					1		1	633	67101	1	EACH	CABINET FOUNDATION, AS PER PLAN	330
																					1		1	633	67201	1	EACH	CONTROLLER WORK PAD, AS PER PLAN	330
																					1		1	633	75001	1	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	330
																					3		3	809	69100	3	EACH	STOP LINE RADAR DETECTION	330
																												STRUCTURE REPAIR (BRIDGE NO. CUY-480-1557)	
																15							15	SPECIAL	51912510	15	SY	PATCHING CONCRETE BRIDGE DECK	326
																												STRUCTURE MODIFICATIONS (RAMP JN-OBE RETAINING WALL BARRIER)	
															145								145	512	10100	145	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
															30								30	516	13600	30	SF	1" PREFORMED EXPANSION JOINT FILLER	
																												MAINTENANCE OF TRAFFIC	
		600																					600	614	11110	600	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		500																					500	614	11630	500	FT	INCREASED BARRIER DELINEATION	
							2																2	614	12381	2	EACH	WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL), AS PER PLAN	20
			19																				19	614	12380	19	EACH	WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL)	
		14																					14	614	12460	14	EACH	WORK ZONE MARKING SIGN	
		6																					6	614	12484	6	EACH	WORK ZONE INCREASED PENALTIES SIGN	
		20																					20	614	12500	20	EACH	REPLACEMENT SIGN	
			1																				1	614	12756	1	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM	
		1000	4333																				5333	614	12800	5333	EACH	WORK ZONE RAISED PAVEMENT MARKER	
		2000																					2000	614	12801	2000	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	29
		115																					115	614	13000	115	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
		50	4523																				4573	614	13310	4573	EACH	BARRIER REFLECTOR, TYPE 1, ONE WAY	
		50																					50	614	13314	50	EACH	BARRIER REFLECTOR, TYPE 3, ONE WAY	
		100	1599																				1699	614	13350	1699	EACH	OBJECT MARKER, ONE WAY	
		105																					105	614	18601	105	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	27
		1.95	7.49																				9.44	614	20110	9.44	MILE	WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT	
		1.45																					1.45	614	20560	1.45	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT	30
			0.01																				0.01	614	21100	0.01	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
		11.45	37.77																				49.22	614	22110	49.22	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	
		10.45																					10.45	614	22360	10.45	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	30
		11597	49746																				61343	614	23210	61343	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT	
		8597																					8597	614	23690	8597	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT	30
		6431	8613																				15044	614	24200	15044	FT	WORK ZONE DOTTED LINE, CLASS I, 642 PAINT	
			104																				104	614	26200	104	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
			869																				869	614	28000	869	FT	WORK ZONE GORE MARKING, CLASS II	
			2																				2	614	30200	2	EACH	WORK ZONE ARROW, CLASS I, 642 PAINT	
			21																				21	614	32700	21	SF	WORK ZONE ISLAND MARKING, CLASS I	
																							LS	615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
			6973																				6973	615	20000	6973	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
		60																					60.00	616	10000	60.00	MGAL	WATER	
			55342																				55342	622	41100	55342	FT	PORTABLE BARRIER, UNANCHORED	
			10515																				10515	622	41011	10515	FT	PORTABLE BARRIER, 50", AS PER PLAN	26
			3																				3	622	41050	3	EACH	PORTABLE BARRIER, "Y" CONNECTOR	
		90																					90	808	18700	90	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
		60																					60	829	00100	60	SNMT	WORK ZONE EGRESS WARNING SYSTEM	
		225																					225	896	00012	225	SNMT	PORTABLE NON-INTRUSIVE TRAFFIC SENSOR, CLASS II	
		90																					90	896	00021	90	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	30
																												INCIDENTALS	
																							LS	100	50200	LS		DEPARTMENT'S SHARE OF THE DISPUTE RESOLUTION ADVISOR	
																							LS	108	10000	LS		CPM PROGRESS SCHEDULE	
																							LS	614	11000	LS		MAINTAINING TRAFFIC	328
	22																						22	619	16021	22	MNTH	FIELD OFFICE, TYPE C, AS PER PLAN	20
																							LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
																							LS	624	10000	LS		MOBILIZATION	

CALCULATED MJT
CHECKED NSP

GENERAL SUMMARY

CUY-176-10.13

CONCRETE BARRIER SUBSUMMARY

SHEET NO.	REFERENCE NO.	STATION FROM	STATION TO	SIDE	LENGTH	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B, AS PER PLAN	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE C	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE C, AS PER PLAN	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D	622 CONCRETE BARRIER END SECTION, TYPE D	622 CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN (1)	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B, AS PER PLAN	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C, AS PER PLAN	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1	622 CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	622 PORTABLE BARRIER, UNANCHORED, AS PER PLAN	622 PORTABLE BARRIER, "Y" CONNECTOR, AS PER PLAN	614 WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL), AS PER PLAN	626 BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL
					FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH
		FROM	TO		L																				
		SR 176																							
151 - 152	CB1	100+19.26	103+40.00	℄	320.74						290.74										2				7.00
152 - 153	CB2	103+60.00	109+90.30	℄	630.30						600.30										2				14.00
153 - 155	CB3	110+10.30	115+94.40	℄	584.10						569.10										1				13.00
155	CB4	115+94.40	117+61.50	℄	167.10			152.10									1								3.00
155	CB4A	118+25.75	119+40.00	℄	114.25			84.25									2								2.00
155 - 156	CB5	119+60.00	124+35.00	℄	475.00			445.00									2								7.00
156 - 158	CB6	125+25.00	130+95.61	℄	570.61			540.61									2								7.00
158	CB6A	131+15.61	132+46.95	℄	131.34			116.34									1								3.00
158	CB7	132+46.95	137+30.00	℄	483.05						468.05										1				6.00
		RAMP OBE-JN																							
186	CB9	106+37.09	106+52.46	RT	15.37									1											2.00
186	CB8	106+80.65	106+95.78	LT	15.13									1											2.00
		RAMP JN-OBE																							
	CB10	NOT	USED																						
221 - 223	CB11	59+66.00	70+90.00	RT	1130.00																		1130.00	1	1	24.00
	CB12	NOT	USED																						
222	CB13	64+90.00	67+15.00	RT	225.00							196.00	1									1				5.00
222 - 223	CB14	67+15.00	73+35.00	RT	620.00					590.00										2						13.00
223	CB15	71+12.30	71+89.44	RT	77.14				47.14									2								2.00
223 & 224	CB16	72+09.44	73+94.44	RT	185.00				155.00									2								3.00
224	CB17	74+14.44	74+95.77	RT	81.33				51.33									2								2.00
224	CB18	75+15.77	75+92.70	RT	76.93				46.93									2								2.00
224	CB19	76+12.70	76+69.44	RT	56.74				26.74									2								2.00
224	CB20	76+89.44	77+59.44	RT	70.00	40.00									2											2.00
224	CB21	77+79.44	78+49.44	RT	70.00	40.00									2											2.00
225	CB22	78+69.44	79+39.44	RT	70.00	40.00									2											2.00
225	CB23	79+59.44	80+39.44	RT	80.00	50.00									2											2.00
225 & 249	CB24	80+59.44	87+38.60	RT	679.16	649.16									2											8.00
249	CB25	87+58.60	87+73.60	RT	15.00										1											2.00
249 & 250	CB26	87+73.60	89+57.62	RT	184.02		154.02									2										3.00
		RAMP GE-2																							
258	CB28	32+00.00	32+90.00	LT	90.00																		90.00		1	2.00
		RAMP JN-OBW																							
279	CB27	40+80.20	41+28.20	LT	48.00							20.00	2												2.00
QUANTITY REMOVED FOR BARRIER INLETS										-80.00															
QUANTITY REMOVED FOR LIGHTING SUPPORTS								-56.00																	
SUBTOTAL						819.16	154.02	1282.30	327.14	510.00	1928.19	216.00	3	2	11	2	8	10	2	6	1	1220.00	1	2	144.00
TOTALS CARRIED TO GENERAL SUMMARY						819	154	1282	327	510	1928	216	3	2	11	2	8	10	2	6	1	1220	1	2	144

CALCULATED NSP
CHECKED MEP

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SHEET NO.	REFERENCE NO.	STATION FROM	STATION TO	SIDE	LENGTH	209 RESHAPING UNDER GUARDRAIL, AS PER PLAN	411 STABILIZED CRUSHED AGGREGATE, AS PER PLAN	441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN	606 GUARDRAIL, TYPE MGS	606 GUARDRAIL, TYPE MGS HALF POST SPACING	606 GUARDRAIL, BARRIER DESIGN, TYPE MGS	606 ANCHOR ASSEMBLY, MGS TYPE E (MASH)	606 ANCHOR ASSEMBLY, MGS TYPE T	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	606 IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL)	626 BARRIER REFLECTOR, TYPE 3, ONE WAY	626 BARRIER REFLECTOR, TYPE 3, BI-DIRECTIONAL
					FT	STA	CY	CY	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH
		FROM	TO		L													
		SR 176																
150	GR27	92+67.35	94+12.23	LT	144.88	1.4		6.71	137.5				1		1			4
150	GR28	92+74.14	94+29.77	RT	155.63	1.6		7.21	75.0			1		1				3
151 & 152	GR1	99+71.49	103+95.28	LT	423.79	4.2		19.62	362.5			1		1				9
152 & 153	GR2	103+13.55	109+76.01	RT	662.46	6.6		30.67	662.5				1		1			15
154	GR3	110+48.82	111+77.08	LT	128.26	1.3		5.94	62.5			1	1					3
155 & 156	GR4	117+35.61	121+79.58	LT	443.97	4.4		20.55	400.0				1			1		5
156 & 157	GR5	120+84.97	129+09.73	RT	824.76	8.2		38.18	762.5			1	1					9
156, 157, 278 & 279	GR6	129+25.82	41+25.20 JN-OBW	LT/RT	1050.00	10.5		48.61	950.0	37.5		1	1					13
158	GR6A	132+29.24	134+02.50	RT	173.26	1.7		8.02	112.5			1	1				3	
		RAMP OBE-JN																
183 & 184	GR7	92+73.03	95+48.26	RT	275.23	2.8		12.74	212.5			1	1					4
184 & 185	GR8	98+97.60	103+07.00	LT	409.40	4.1	52.11 (CADD)	11.62 (CADD)			412.5							12
185 & 186	GR9	103+07.00	107+21.78	LT	414.78	4.1		19.20	412.5									6
185 & 186	GR10	103+07.00	106+83.10	LT	376.10	3.8	106.91 (CADD)	3.80 (CADD)	350.0					1				8
186	GR11	104+99.71	106+39.61	RT	139.90	1.4		6.48	62.5			1		1				3
188	GR12	115+23.53	117+24.41	RT	200.88	2.0		9.30	137.5			1	1					4
		RAMP JN-OBE																
218 & 219	GR13	46+88.97	48+71.78	LT	182.81	1.8		8.46	100.0			1		1				3
218 & 219	GR14	47+25.98	49+13.24	RT	187.26	1.9		8.67	112.5			1		1				4
220	GR16	56+00.42	57+49.59	RT	149.17	1.5		6.91	137.5				1		1			4
220 - 222	GR15	56+43.61	64+74.45	LT	830.84	8.3		38.46	793.87					1	1			17
221 & 222	GR17	62+74.46	64+92.50	RT	218.04	2.2		10.09	137.5			1		1				4
223	GR18	69+36.10	72+87.70	LT	351.60	3.5			337.5				1		1			8
		RAMP OBW-JN																
262 & 263	GR19	35+87.05	43+42.50	LT	755.45	7.6		34.97	725.0					1				16
263 & 264	GR20	42+42.87	45+04.50	RT	261.63	2.6		12.11	187.5			1		1				5
264 & 265	GR22	48+63.10	49+93.72	LT	130.62	1.3		6.05	112.5				1		1			4
264 & 265	GR21	48+96.10	49+97.74	RT	101.64	1.0		4.71	75.0				1		1			3
		RAMP JN-OBW																
278 & 279	GR23	38+46.45	40+79.91	LT	233.46	2.3		10.81	212.5					1				4
279	GR25	41+20.92	42+55.44	LT	134.52	1.3		6.23	125.0				1		1			3
	GR24	NOT	USED															
280 - 282	GR26	48+81.26	59+86.55	RT	1105.29	11.1		51.17	1037.5			1	1					22
SUBTOTAL						105	159.02	447.29	8793.87	37.5	412.5	14	15	11	8	1	3	195
TOTALS CARRIED TO GENERAL SUMMARY						105	159	447	8794	37.5	412.5	14	15	11	8	1	3	195

GUARDRAIL SUBSUMMARY

CUY-176-10.13

CALCULATED NSP
CHECKED MEP

PLAN SHEET NO.	REFERENCE NO.	STATION FROM	STATION TO	SIDE	601 TIED CONCRETE BLOCK MAT, TYPE 1	605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	605 6" DEEP PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	605 6" ROCK CUT UNDERDRAINS WITH GEOTEXTILE FABRIC	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	611 PRECAST REINFORCED CONCRETE OUTLET	FOR INFORMATION ONLY 90-DEGREE BEND	FOR INFORMATION ONLY 45-DEGREE BEND	FOR INFORMATION ONLY 6"X6" TEE	FOR INFORMATION ONLY 6"X6" CROSS	FOR INFORMATION ONLY 6"X6" WYE
					SY	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH
155-156,278	U49	119+55.20	121+85.00	SR-176 LT.			937						2		2		
156-278	U50	121+85.00	125+10.00	SR-176 LT.		650									2		
157	U51	125+15.00	130+45.00	SR-176 LT.		1060									2		
157	U52	125+15.00	130+45.00	SR-176 RT.		530									1		
180	U53	76+50.00	78+78.00	OBE-JN LT.				228			41			1	1		
180	U54	76+50.00	78+78.00	OBE-JN RT.				228					1				
180-181	U55	78+83.00	81+04.21	OBE-JN LT.			213				10			1			
180-181	U56	78+83.00	81+04.21	OBE-JN RT.			203				25			1			
181	U57	81+06.00	84+60.00	OBE-JN RT.	2				357		111	1			1		
181	U58	81+06.00	84+60.00	OBE-JN LT.					357				1				
182	U59	84+60.00	88+65.00	OBE-JN RT.		405											
182	U60	84+60.00	88+65.00	OBE-JN LT.		405											
182-183	U60A	88+65.00	90+46.00	OBE-JN LT.						183	10			1			
182-183	U61	88+65.00	93+98.93	OBE-JN RT.						503	43			1			
183-184	U62	90+46.20	96+15.52	OBE-JN LT.						571	10			1			
184-185	U63	96+93.00	101+60.00	OBE-JN LT.		461											
184	U63A	96+25.00	96+93.00	OBE-JN LT.						68							
185	U64	101+60.00	102+35.00	OBE-JN LT.						148			1		1		
185	U65	100+59.26	101+60.00	OBE-JN LT.		100											
183-184,185	U66	96+93.00	101+60.00	LT./RT.		470											
184	U66A	93+71.68	96+93.00	LT./RT.						322							
185	U67	101+60.00	102+35.00	OBE-JN RT.						76	50				1		
185-186	U68	102+40.00	107+80.00	OBE-JN LT.						544			1				
185-186,186	U69	102+40.00	104+63.00	OBE-JN LT.						223					1		
185-186	U70	102+40.00	107+49.00	OBE-JN RT.						508	50			1	1		
186	U71	104+64.00	107+58.00	OBE-JN CL.						304			1		1		
186-187	U72	107+67.00	113+22	OBE-JN CL.						555			1				
186-187	U72A	108+07.00	113+22.00	OBE-JN LT.						536	20		1	1			
186-187	U73	107+67.00	113+22.00	OBE-JN RT.						547	43			2	1		
155-187,188	U74	113+22.00	115+86.00	LT./RT.						273							
155-187,188	U75	113+22.00	115+86.00	OBE-JN RT.						525							
155-188	U76	115+86.00	116+76.15	OBE-JN LT.						92					1		
155-188	U77	115+86.00	119+43.00	OBE-JN RT.						713					2		
155-188	U78	116+75.76	119+43.00	OBE-JN LT.						268	49		1	1			
155-156	U79	119+54.00	125+09.32	OBE-JN LT.		557									1		
155-156	U80	119+54.00	125+09.32	OBE-JN RT.		1110									2		
157	U81	125+13.00	130+44.00	OBE-JN RT.	2	1062					153	1			2		
218-278,279	U82	40+40.00	43+86.00	JN-OBE CL.					347						1		
278-279	U83	40+40.00	43+86.00	JN-OBE LT.					349						1		
218-219,279	U84	43+87.00	48+94.00	LT./RT.			521						1				
220	U85	56+60.00	58+50.00	JN-OBE LT.			368										
220	U86	56+16.00	58+50.00	LT./RT.			239										
221-258	U87	58+50.00	61+24.77	LT./RT.					544				1		1		
221-258	U88	58+50.00	60+41.78	LT./RT.					196						1		
221-258	U89	33+26.37	30+32.28	GE-2 LT.					353				1	1	1		
221-258	U90	30+30.00	33+28.49	LT./RT.					321		79			2	1		
221-222,223	U91	61+30.00	69+75.00	LT./RT.			843				10						
SUBTOTAL (CARRIED TO SHEET 142)					4	6810	3324	456	2824	6959	704	2					

UNDERDRAIN SUBSUMMARY

CUY-176-10.13

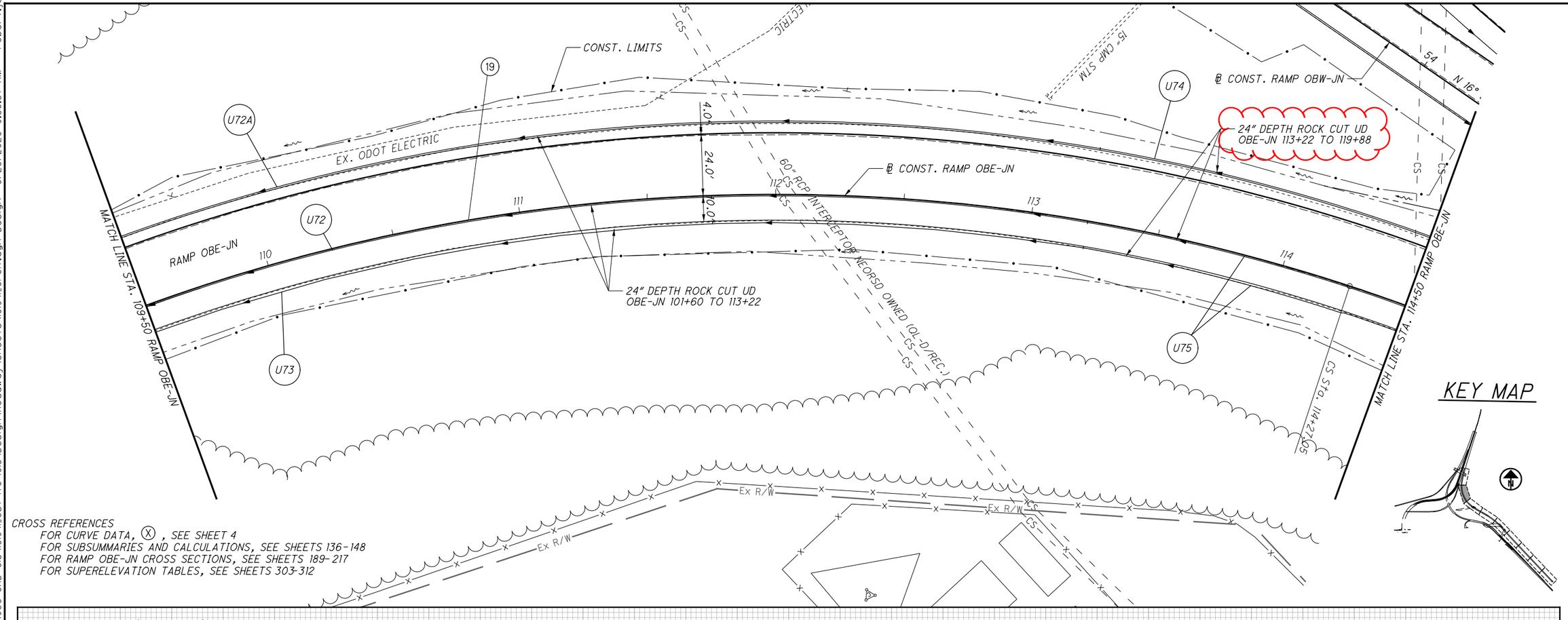
CALCULATED MJT
CHECKED NSP

PLAN SHEET NO.	REFERENCE NO.	STATION FROM	STATION TO	SIDE	601 TIED CONCRETE BLOCK MAT, TYPE 1	605 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	605 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	605 6" DEEP PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	605 6" ROCK CUT UNDERDRAINS WITH GEOTEXTILE FABRIC	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	611 PRECAST REINFORCED CONCRETE OUTLET	FOR INFORMATION ONLY 90-DEGREE BEND	45-DEGREE BEND	6"X6" TEE	6"X6" CROSS	6"X6" WYE
					SY	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH
221-222,223	U92	61+30.00	70+10.93	JN-OBE RT.			879								1		
221-222,223	U93	61+30.00	69+00.00	LT./RT.			750				10		1				
223	U94	69+80.00	70+23.00	JN-OBE LT.			31				10						
223	U95	69+04.00	70+11.00	JN-OBE RT.			95				10						
223	U96	70+23.00	70+94.00	JN-OBE LT.			69				10						
	U97	70+11.00	70+89.00	JN-OBE RT.			79										
223	U98	70+11.00	71+00.00	JN-OBE RT.			79				10						
223	U99	70+11.00	70+11.00	JN-OBE RT.							19						
278	U100	121+85.00	125+09.90	OBE-JN RT.		325									1		
	U101	NOT USED															
224-223	U102	71+00.00	75+54.00	JN-OBE LT.						445	10			2			
223	U103	71+00.97	71+88.00	JN-OBE RT.						74	10						
221-223,224	U104	71+00.97	75+54.00	JN-OBE RT.						440	10			2			
223-224	U105	72+00.00	73+93.00	JN-OBE RT.						184	10						
224	U106	74+04.00	74+95.00	JN-OBE RT.						81	10						
224	U107	75+05.77	75+54.00	JN-OBE RT.						38	10						
224	U108	75+54.00	76+03.00	JN-OBE RT.					38		10						
264-265,224	U109	75+54.00	76+03.00	JN-OBE LT.					40		10						
264-265,224	U110	75+54.00	76+03.00	JN-OBE RT.					49		13				1		
262-263,224	U111	50+25.00	51+14.60	LT./RT.						91				2	1		
262-263,224	U112	50+25.00	51+14.60	LT./RT.						180	43			1		2	
224-225	U113	74+81.28	82+00.00	LT./RT.						719							
224-225	U114	74+81.28	82+00.00	JN-OBE RT.						1440							
224	U115	76+03.00	76+49.00	JN-OBE RT.					47								
224	U116	76+03.00	76+69.00	JN-OBE RT.					55		10						
224-225	U117	76+03.00	82+00.00	JN-OBE LT.					598		10						
224	U118	76+79.00	77+59.00	JN-OBE RT.					70		10						
224	U119	77+69.00	78+49.00	JN-OBE RT.					70		10						
225	U120	78+59.00	79+39.00	JN-OBE RT.					69		10						
225	U121	79+49.00	80+39.00	JN-OBE RT.					80		10						
225	U122	80+49.00	82+00.00	JN-OBE RT.					141		10						
225-249	U123	82+00.00	87+33.00	JN-OBE RT.						1599	25		1		2		
225-249	U124	82+00.00	87+49.00	JN-OBE RT.					1082		10		1		1		
249-250	U125	287+60.00	292+31.00	EB-OL LT.					474					2	1		
249-250	U126	287+35.00	292+31.00	LT./RT.						992	35					2	
250	U127	292+31.00	293+24.00	LT./RT.						186							
250	U128	292+31.00	293+24.00	LT./RT.					93								
SUBTOTAL (THIS SHEET)						325	1982		2906	6469	345						
SUBTOTAL (CARRIED FROM SHEET 141)					6	2936	17721		3016	1830	627	3					
SUBTOTAL (CARRIED FROM SHEET 142)					4	6810	3324	456	2824	6959	704	2					
TOTALS CARRIED TO GENERAL SUMMARY					10	10071	23027	456	8746	15258	1676	5					

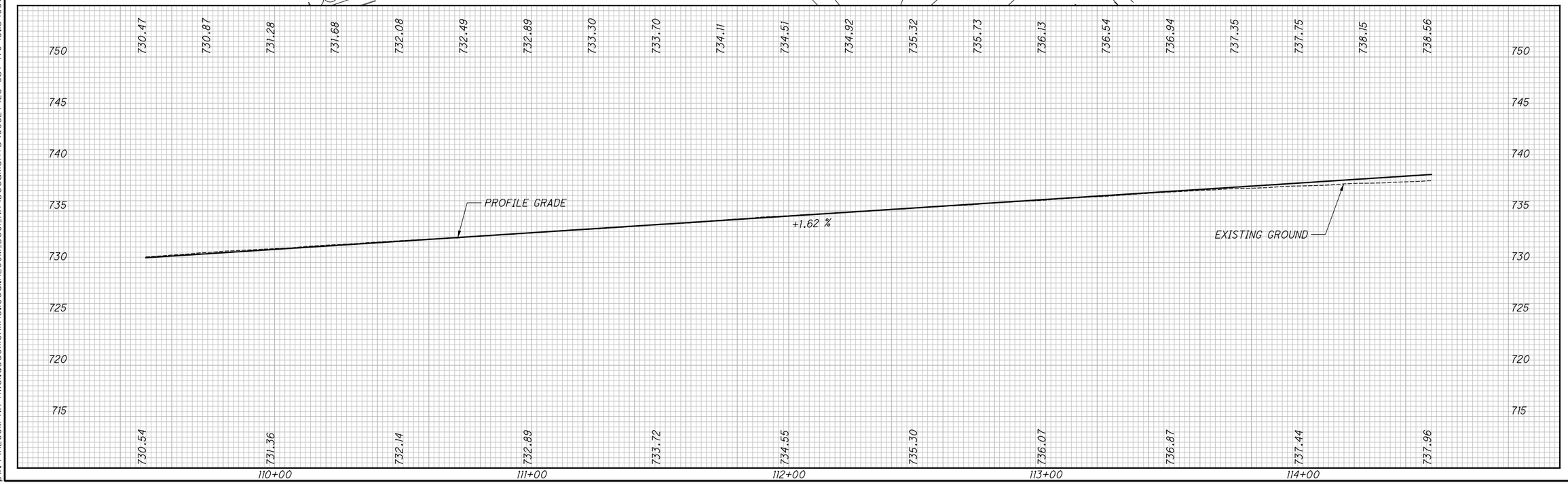
UNDERDRAIN SUBSUMMARY

CALCULATED MJT
CHECKED NSP

CUY-176-10.13



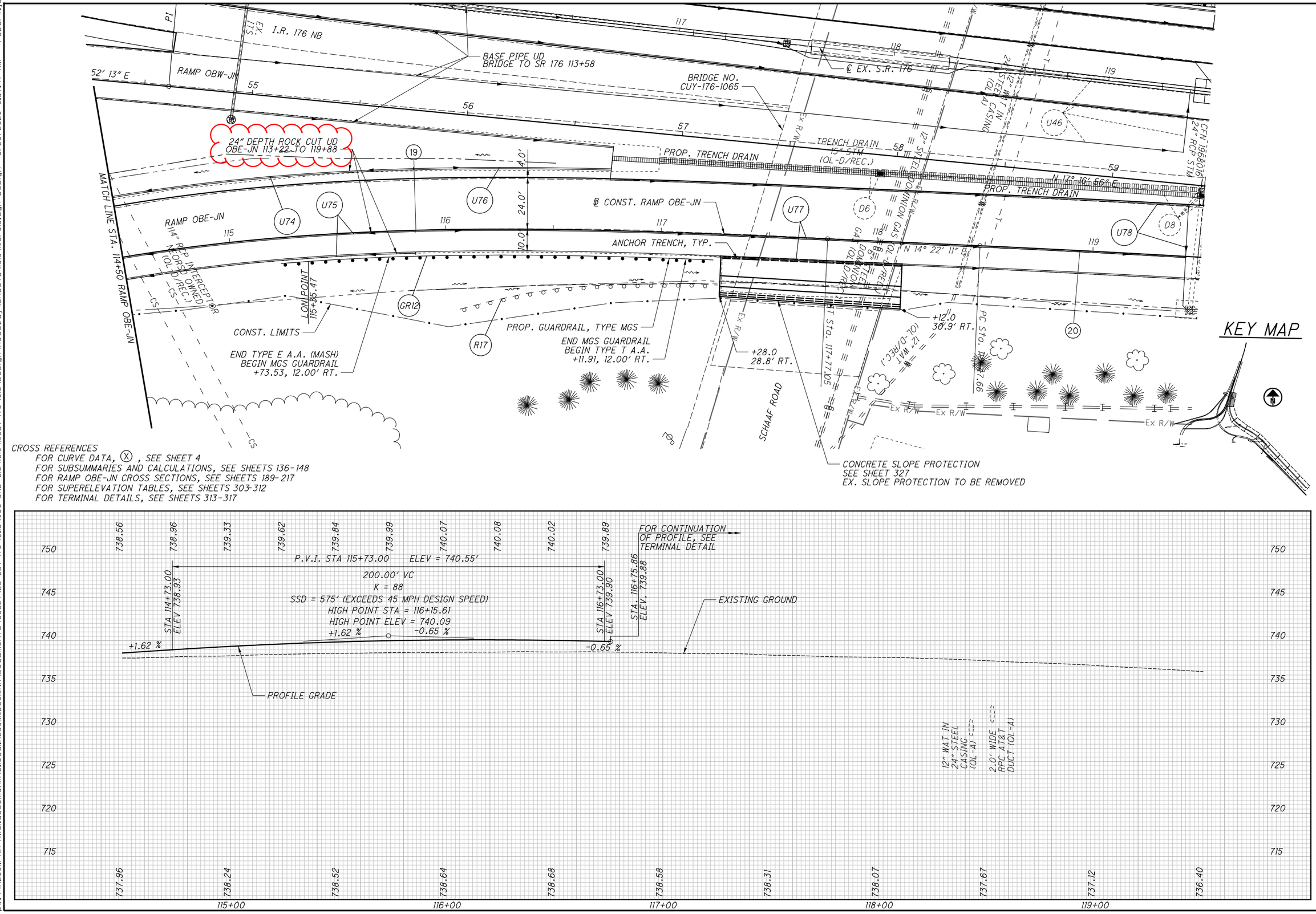
CROSS REFERENCES
FOR CURVE DATA, Ⓧ , SEE SHEET 4
FOR SUBSUMMARIES AND CALCULATIONS, SEE SHEETS 136-148
FOR RAMP OBE-JN CROSS SECTIONS, SEE SHEETS 189-217
FOR SUPERELEVATION TABLES, SEE SHEETS 303-312



HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED AMP
CHECKED MAW

PLAN AND PROFILE - RAMP OBE-JN
STA. 109+50 TO STA. 114+50

CUY-176-10.13



CROSS REFERENCES
FOR CURVE DATA, Ⓧ , SEE SHEET 4
FOR SUBSUMMARIES AND CALCULATIONS, SEE SHEETS 136-148
FOR RAMP OBE-JN CROSS SECTIONS, SEE SHEETS 189-217
FOR SUPERELEVATION TABLES, SEE SHEETS 303-312
FOR TERMINAL DETAILS, SEE SHEETS 313-317

PLAN AND PROFILE - RAMP OBE-JN
STA. 114+50 TO STA. 119+50

CUY-176-10.13

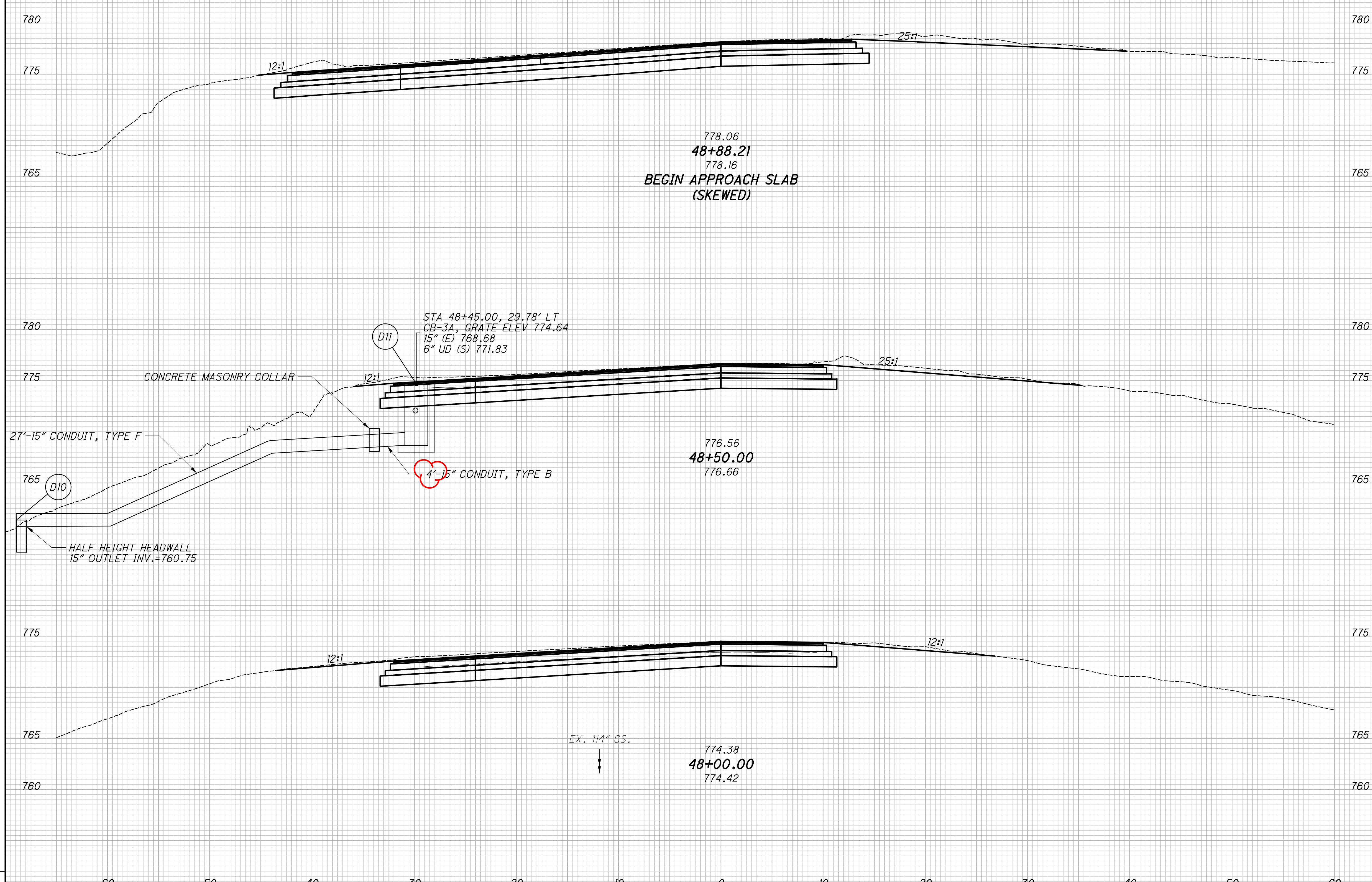
188
363

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED AMP
CHECKED MAW

pw:\\AECOM-NA-AWS1.aecomonline.local:AECOM_DS01_NA\Documents\60527425-CUY-176-10.13\900-CAD GIS\101941_CUY-176-10.13\Design\Roadway\Sheets\101941_XS005.dgn Sheet 6/22/2020 12:00:08 PM robert.janko

SEEDING	
END WIDTH	SQ. YDS.
30	
	125
29	
	158
28	
	164
	447



END AREA		VOLUME	
CUT	FILL	CUT	FILL
157	0		
		193	0
116	0		
		217	0
118	0		
		227	0
		637	0

CALCULATED JEM
CHECKED MAW

CROSS SECTIONS RAMP JN-OBE
STA. 48+00.00 TO STA. 48+88.21

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SEEDING END WIDTH	SEEDING SQ. YDS.
24	
	122
20	
	56
20	
	0
	178

TEMPORARY PAVEMENT

780
775
765

13:1

12:1

777.46
57+00.00
777.40

780
775
765

12:1

STA 56+57.96, 26.54' LT
CB-3A, GRATE ELEV 777.41
15" (NE) 771.41

D13

12:1

CONCRETE MASONRY COLLAR

27'-15" CONDUIT, TYPE F

D12

5'-15" CONDUIT, TYPE B

779.30
56+50.00
779.16

HALF HEIGHT HEADWALL
15" OUTLET INV.=763.98

780
775
765

780.14
56+24.66
780.14
END APPROACH SLAB
(SKEWED)

60 50 40 30 20 10 0 10 20 30 40 50 60

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
114	0		
		213	0
116	0		
		129	0
158	0		
		0	0
		342	0

CALCULATED JEM
CHECKED MAW

CROSS SECTIONS RAMP JN-OBE
STA. 56+24.66 TO STA. 57+00.00

CUY-176-10.13

MATCH LINE STA. 48+25

MATCH LINE STA. 49+00

MATCH LINE STA. 110+50 SEE SHEET 333

MATCH LINE STA. 49+75

MATCH LINE STA. 850+00 SEE SHEET 332

MATCH LINE STA. 56+00

MATCH LINE STA. 58+75

MATCH LINE STA. 99+50 SEE SHEET 331

MATCH LINE STA. 38+50

S.R. 176 SB TO S.R. 17 RAMP

S.R. 17 TO S.R. 176 NB RAMP

RAMP JN-OBE

RAMP JN-OBW

RAMP OBW-JN

I.R. 480 EB

I.R. 480 WB

RPM-4

EY

EW

LL

TY

CONTRACTOR SHALL ADJUST THE YELLOW EDGE LINE OFFSET TO AVOID OVERLAPPING THE EXISTING RPMS TO REMAIN

FOR LEGEND, SEE SHEET 331

HORIZONTAL SCALE IN FEET

0 25 50 100

CALCULATED CX

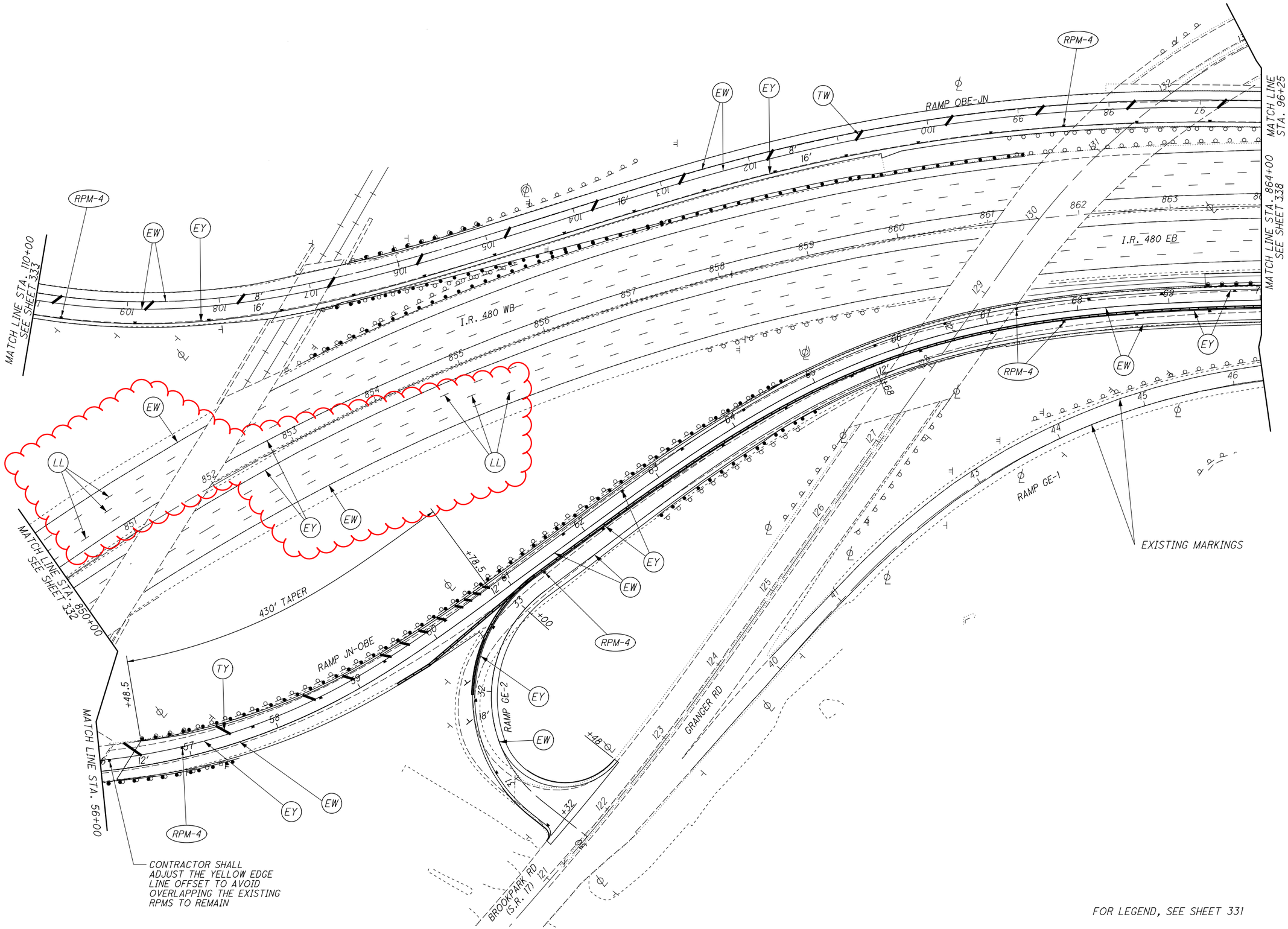
CHECKED TKI

PAVEMENT MARKING PLAN

STA. 99+50 TO STA. 110+50

CUY-176-10.13

332
363



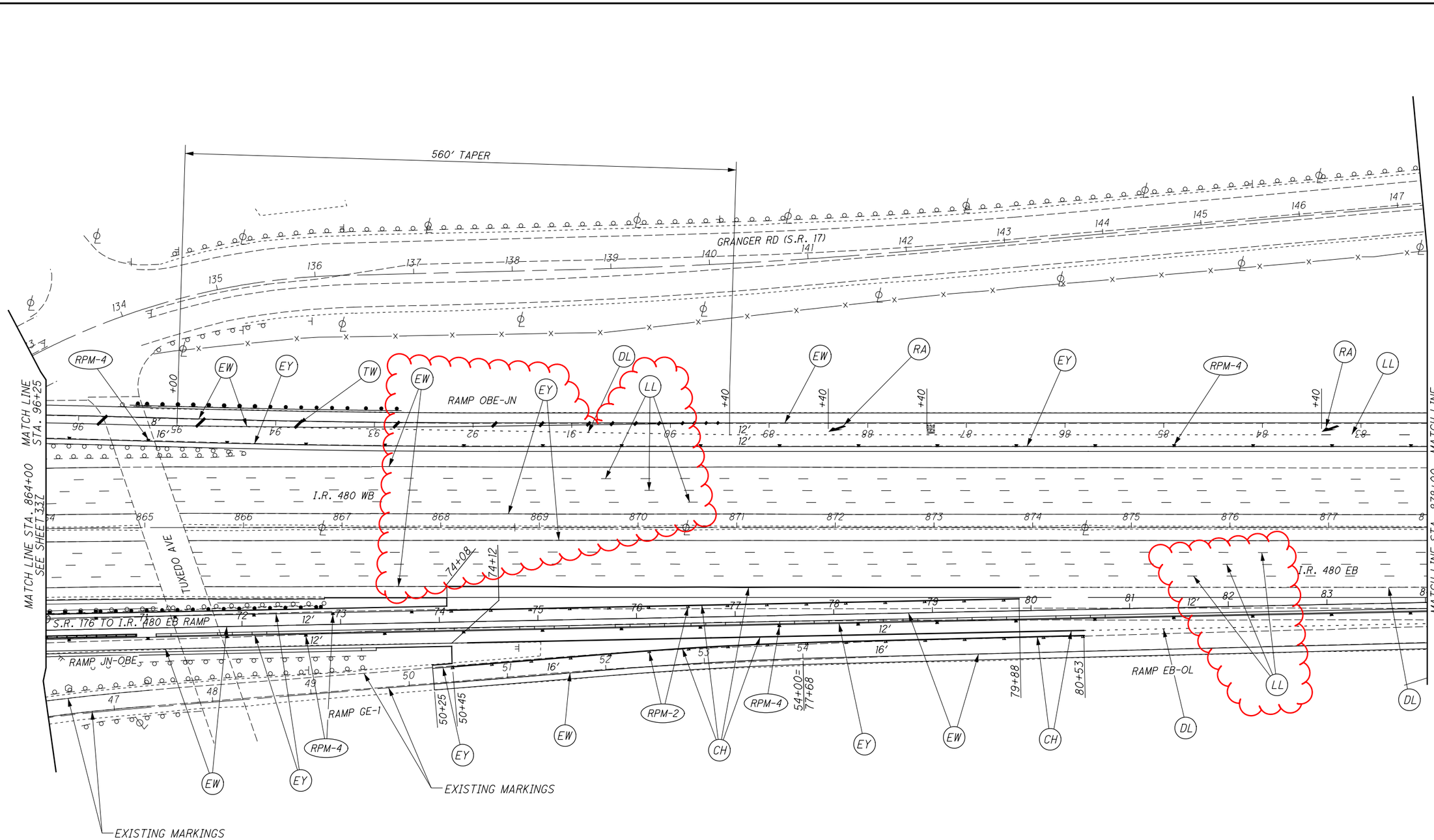
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED CX
CHECKED TKI

PAVEMENT MARKING PLAN
STA. 850+00 TO STA. 864+00 (I.R. 480)

CUY-176-10.13

337
363



FOR LEGEND, SEE SHEET 331

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED CX
CHECKED TKI

PAVEMENT MARKING PLAN
STA. 864+00 TO STA. 878+00 (I.R. 480)

CUY-176-10.13

END PROJECT STA. 891+36

EXISTING MARKINGS

74+96 MEET EXISTING MARKINGS

RPM-4

RAMP OBE-JN

MATCH LINE STA. 82+25

MATCH LINE STA. 878+00 SEE SHEET338

I.R. 480 WB

I.R. 480 EB

RAMP EB-OL

S 43° 21' 38" E

91+58 MEET EXISTING MARKINGS

293+25 MEET EXISTING MARKINGS

EW EY LL RA DL

FOR LEGEND, SEE SHEET 331

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED CX
CHECKED TKI

PAVEMENT MARKING PLAN
STA. 878+00 TO STA. 891+36 (I.R. 480)

CUY-176-10.13

PAVEMENT MARKING SUB-SUMMARY

SHEET NO.	REFERENCE NO.	STATION FROM	STATION TO	SIDE	621 RPM (EACH)	621 RPM REFLECTOR (EACH)	621 RAISED PAVEMENT MARKER REMOVED (EACH)	646 EDGE LINE, 6" (MILE)	646 LANE LINE, 6" (MILE)	646 LANE LINE, 6", AS PER PLAN (MILE)	646 CHANNELIZING LINE, 12" (FT)	646 STOP LINE (FT)	646 CROSSWALK LINE (FT)	646 TRANSVERSE/DIAGONAL LINE (FT)	646 CHEVRON MARKING (FT)	646 ISLAND MARKING (SF)	646 LANE ARROW (EACH)	646 WRONG WAY ARROW (EACH)	646 LANE REDUCTION ARROW (EACH)	646 WORD ON PAVEMENT, 96" "MERGE" (EACH)	646 DOTTED LINE, 6" YELLOW 2′ LINE 6′ GAP (FT)	646 DOTTED LINE, 6" 3′ LINE 9′ GAP (FT)	646 DOTTED LINE, 12" 3′ LINE 9′ GAP (FT)	646 REMOVAL OF PAVEMENT MARKING (EACH)	646 REMOVAL OF PAVEMENT MARKING (FT)
		RAMP JN-OBE																							
339	EW	84+00	91+58	BL				0.14																	
339	DL	84+00	91+58	LT																		758			
		RAMP EB-OL																							
339	RPM4	284+00	293+25	LT	11		11																		
339	EY	284+00	293+25	BL				0.18																	
339	EW	284+00	293+25	RT				0.18																	
339	DL	284+00	293+25	RT																		925			
		IR 480																							
332	EY	845+71	891+36	CL				0.86																	
337	EY	851+50	891+25	CL				0.75																	
332	EW	845+71	891+36	LT				0.86																	
337	EW	851+50	891+25	RT				0.75																	
332	LL	842+71	904+39 (X3)	LT		154			3.50																
332	LL	848+50	894+25 (X3)	RT		114			2.60																
TOTALS THIS SHEET					11	269	11	3.73	6.10	0.00	0	0	0	0	0	0	0	0	0	0	0	1683	0	0	0
TOTALS FROM SHEET			340		90	18	99	2.59	0.00	0.00	157	67	313	0	0	162	6	2	0	0	97	0	0	6	729
TOTALS FROM SHEET			341		109	8	149	2.19	0.12	0.00	2356	0	0	554	0	0	0	0	0	0	0	0	0	0	0
TOTALS FROM SHEET			342		117	0	177	2.60	0.25	0.92	3643	0	0	161	308	0	0	0	0	0	0	564	1265	0	0
TOTALS FROM SHEET			343		86	0	151	2.57	0.16	0.00	2441	0	0	179	0	0	0	0	3	1	0	1919	0	0	0
TOTALS CARRIED TO GENERAL SUMMARY					413	295	587	13.68	6.63	0.92	8597	67	313	894	308	162	6	2	3	1	97	4166	1265	6	729

CALCULATED CX
CHECKED JMB

CUY-176-10.13