

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MOT-VAR VAR

MONTGOMERY COUNTY

SEE SHEET 2

PROJECT DESCRIPTION

INSTALL BARRIER WALL TO REPLACE EXISTING GUARDRAIL ON RAMP "E" AT THE INTERCHANGE OF IR 70 AND IR 75, INCLUDING GUARDRAIL EXTENSION ON RAMP "H", AND BARRIER REPLACEMENT ON IR 75 NB NEAR KEENAN RD, AND ON SR 4 SB AT RAMP "F" THE EXIT VALLEY STREET.

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

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

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.

FEDERAL PROJECT NO.
NON-FEDERAL

PID NO.
100792

CONSTRUCTION PROJECT NO.

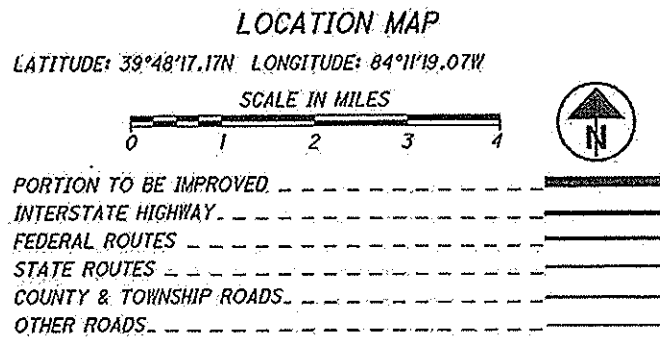
RAILROAD INVOLVEMENT
NONE

MOT-VAR VAR

1
51

MOT - VAR VAR
160216 PID - 100792
Dist 7 4/7/2016

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



DESIGN DESIGNATION	I 70/75	I 75	SR 4
CURRENT ADT (2017)	13,100	106,000	16,905
DESIGN YEAR ADT (2037)	15,600	116,000	20,529
DESIGN HOURLY VOLUME (2037)	9%	10%	9%
DIRECTIONAL DISTRIBUTION	60%	57%	54%
TRUCKS (24 HOUR B&C)	12%	10%	10%
DESIGN SPEED	70 mph	70 mph	65 mph
LEGAL SPEED	65 mph	55 mph	60 mph

DESIGN FUNCTIONAL CLASSIFICATION: URBAN INTERSTATE / PRINCIPAL ARTERIAL

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CONC. BARRIER AND GUARDRAIL PIS	44-49
STRUCTURES (20' AND OVER)	50,51

NHS PROJECT NO

DESIGN EXCEPTIONS

N/A

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 UNDERGROUND
PROTECTION SERVICE CALL: 1-800-925-0988

PLAN PREPARED BY:
OHIO DEPT. OF TRANSPORTATION
DISTRICT 7 PLANNING & ENGINEERING
SIDNEY, OH

ENGINEERS SEAL:

STATE OF OHIO
RYAN P. HANKE
No. 76841
REGISTERED PROFESSIONAL ENGINEER

SIGNED: *Ryan P. Hanke*
DATE: 1-7-16

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
BP-3.1	7-18-14	BR-1-13	1-17-14	800	1/15/16		
BP-2.1	7-7-15						
BP-2.2	7-18-08	SRB-1-13	1-17-14	821	4/20/12		
				832	1/17/14		
RM-4.2	6-4-14	MT-95.30	7-18-14				
RM-4.3	7-18-14	MT-95.40	7-18-14	921	4/20/12		
RM-4.5	7-18-14	MT-98.21	7-18-14				
RM-4.6	7-19-13	MT-98.22	7-18-14				
		MT-101.60	7-19-13				
		MT-101.70	1-17-14				
MGS-1.1	7-19-13	MT-101.90	7-17-15				
MGS-2.1	7-19-13						
MGS-3.1	7-18-14						
MGS-3.2	1-18-13						
MGS-4.3	1-18-13						

APPROVED: *Randy Prevally PE, PS*
DATE: 01/07/16 DISTRICT DEPUTY DIRECTOR

APPROVED: *James Wright*
DATE: 01-20-16 DIRECTOR, DEPARTMENT OF TRANSPORTATION

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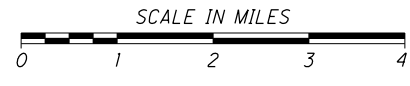
RAMP "H"
EASTBOUND IR 70
TO
SOUTHBOUND IR 75
(MOT-75 S.L.M. 20.4)

RAMP "E"
EASTBOUND IR 70
TO
NORTHBOUND IR 75
(MOT-75 S.L.M. 20.4)

RAMP "C"
NORTHBOUND IR 75
TO
WESTBOUND IR 70
(MOT-75 S.L.M. 20.4)

LOCATION MAP - IR70 AND IR75 INTERCHANGE

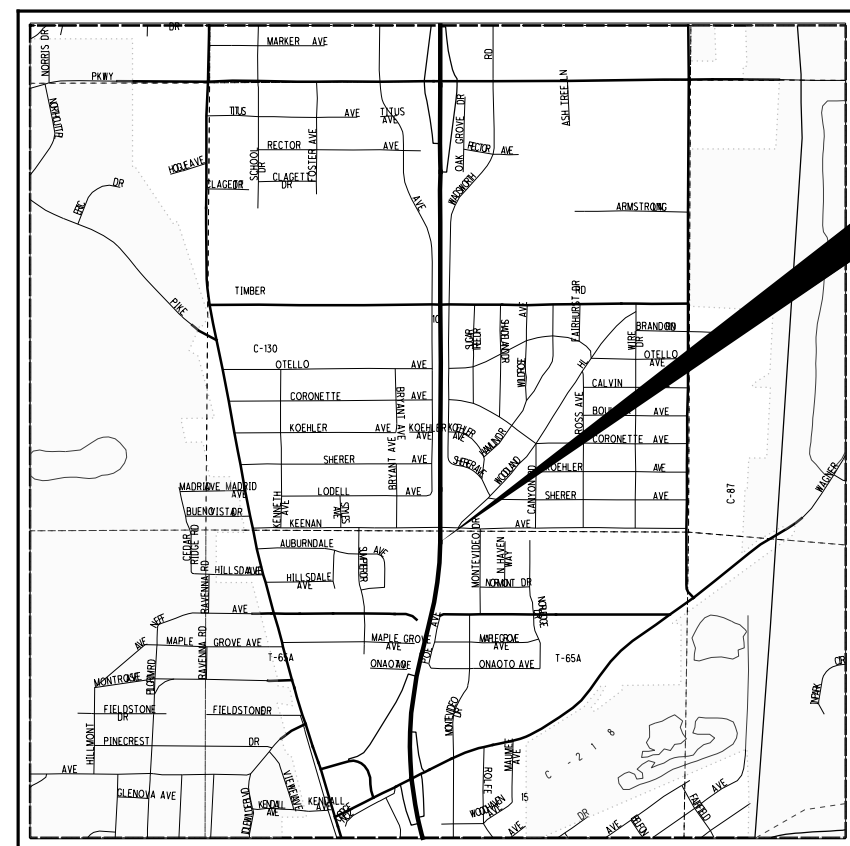
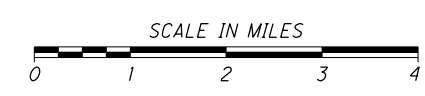
LATITUDE: 39°51'55.49" N LONGITUDE: 84°11'20.96" W



SOUTHBOUND SR 4
AT EXIT TO
VALLEY ST.
S.L.M. 18.4

LOCATION MAP - MOT 4

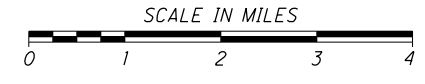
LATITUDE: 39°46'19.48" N LONGITUDE: 84°10'13.50" W



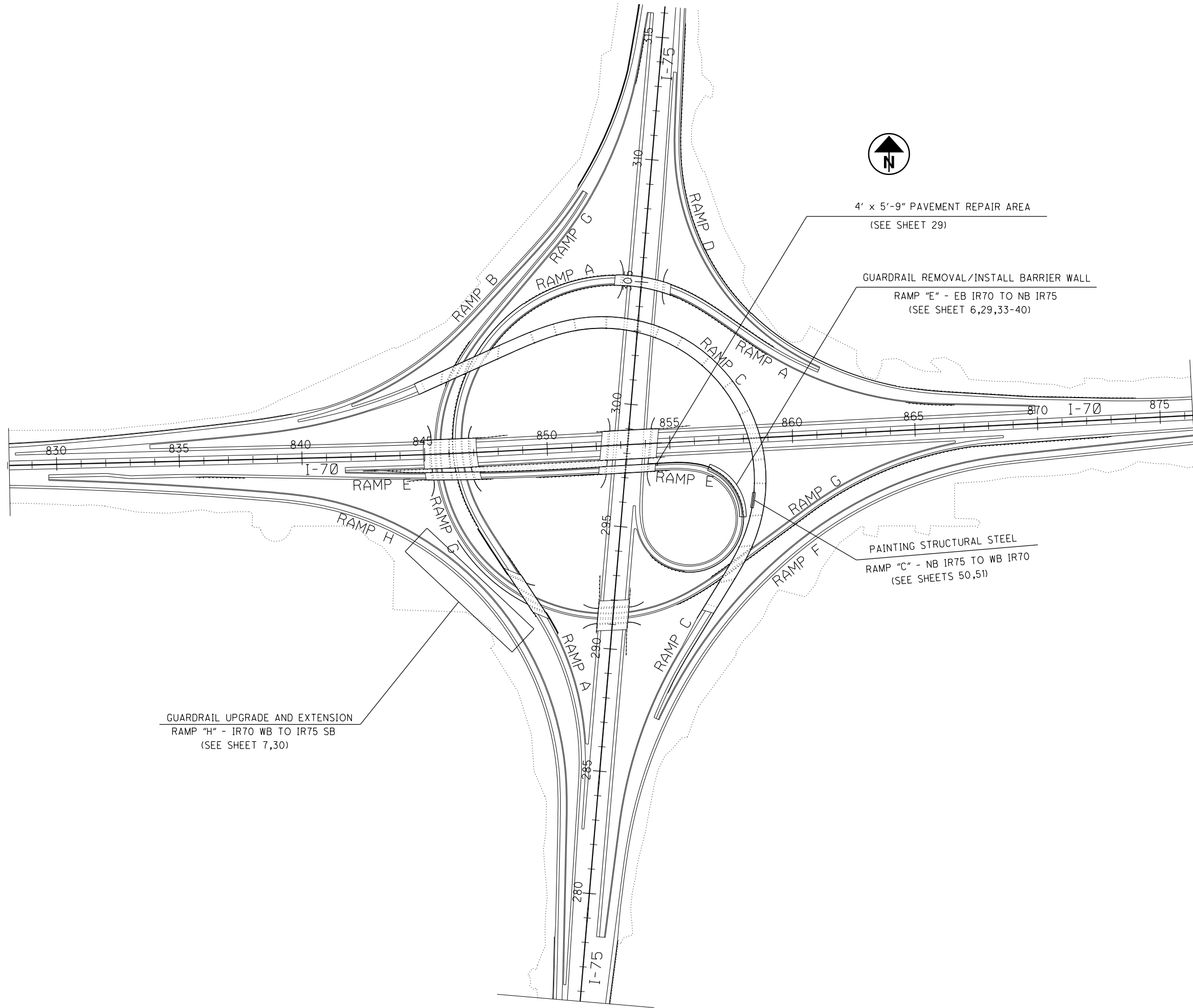
NORTHBOUND IR 75
BETWEEN NEFF RD.
AND KEENAN AVE.
S.L.M. 16.2

LOCATION MAP - MOT 75

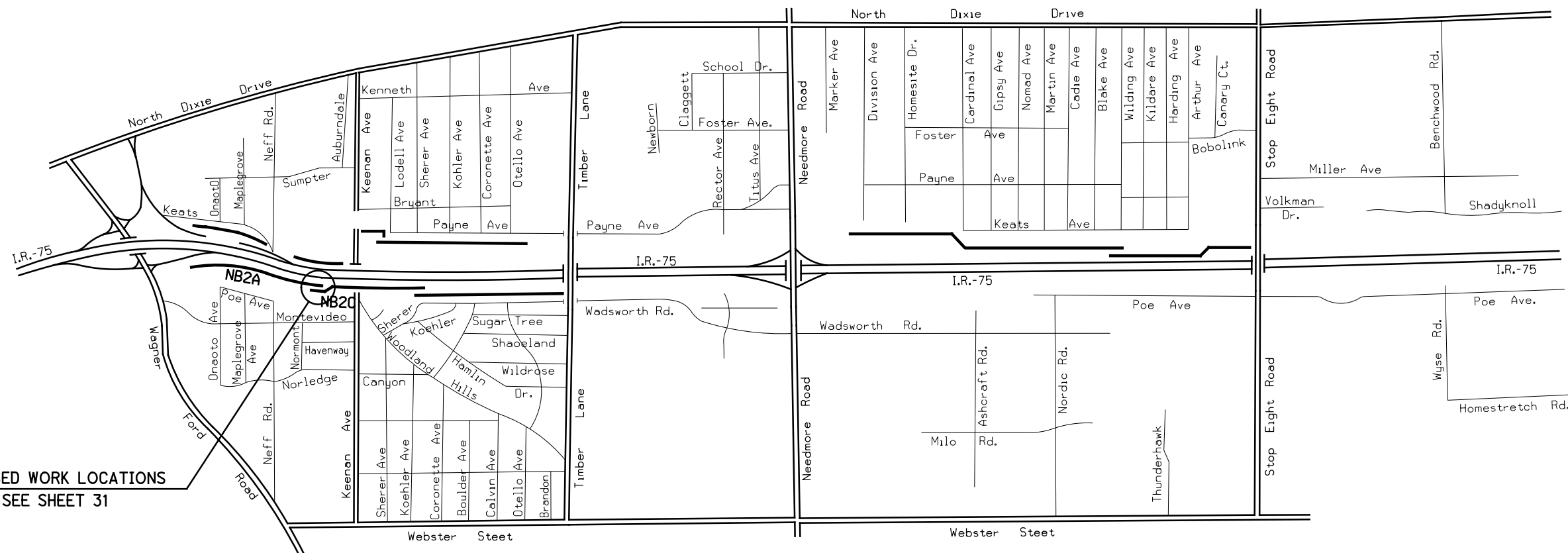
LATITUDE: 39°48'18.07" N LONGITUDE: 84°11'18.59" W



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PROPOSED WORK LOCATIONS
SEE SHEET 31



NOISE BARRIER LOCATIONS

NB2A = Along Northbound I.R.-75 from Wagner Ford Road to South of Keenan Ave.

NB2C = Along Northbound I.R.-75 north and south of Keenan Ave.

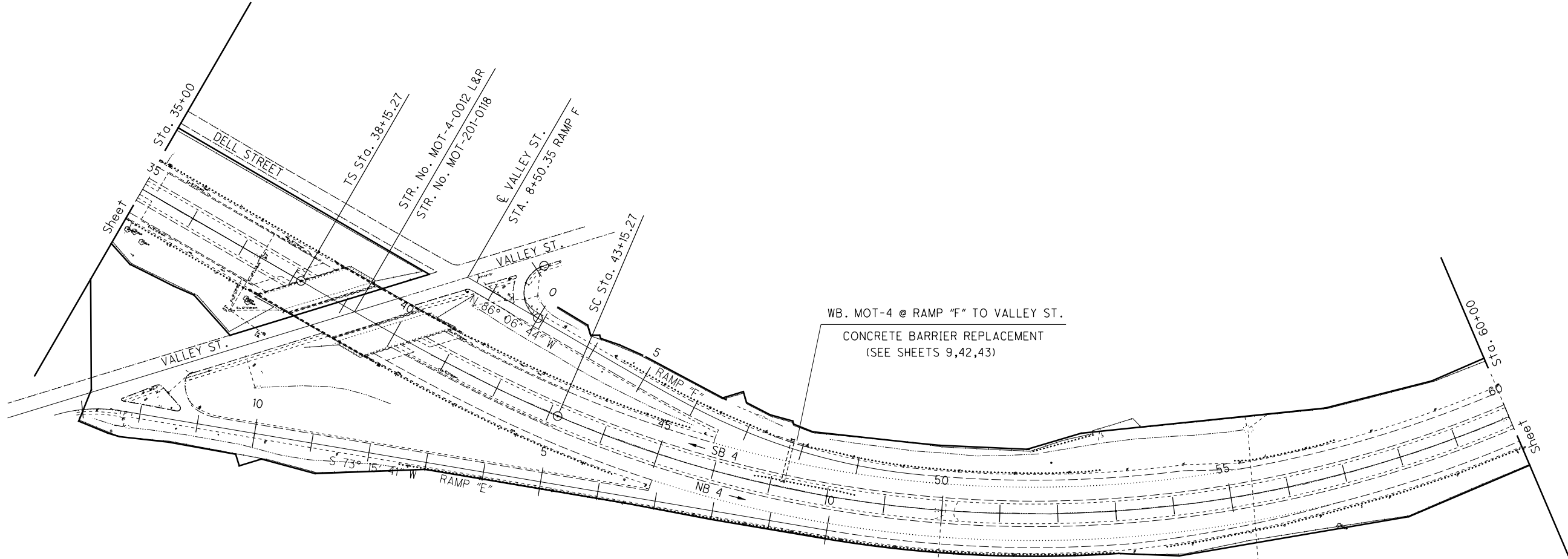
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HORIZONTAL
SCALE IN FEET

N

SCHEMATIC PLAN
MOT-75-16.20

MOT-VAR VAR

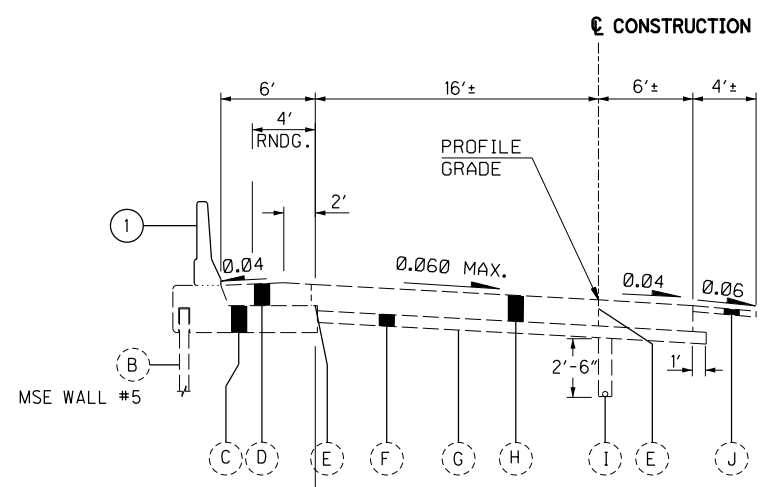


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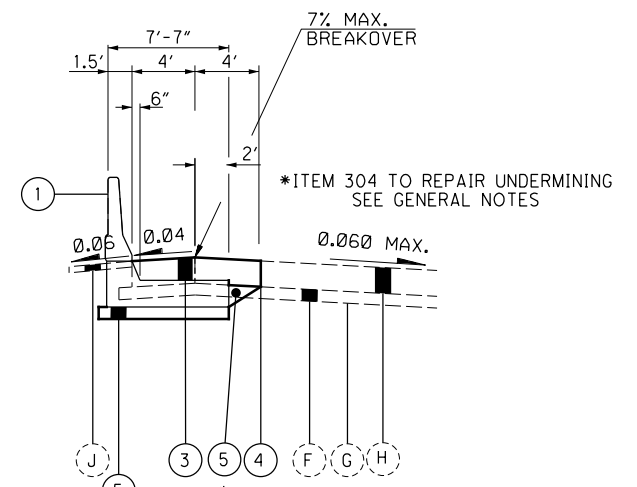
SCHEMATIC PLAN - MOT 4
STA. 35+00 TO STA. 60+00

MOT-VAR VAR



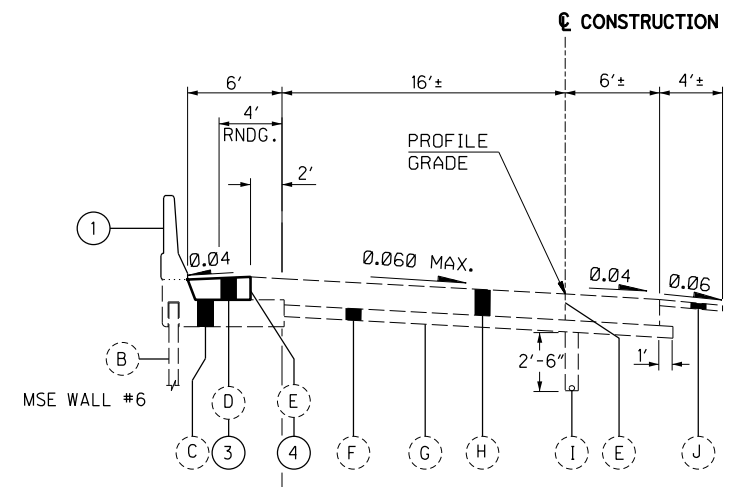
1-LANE SUPERELEVATED SECTION - RAMP "E"

STA. 200+33.15 TO 200+48.15 = 15 FT.



1-LANE SUPERELEVATED SECTION - RAMP "E"

STA. 200+48.15 TO STA. 202+58.92 = 210.8 FT.
FOR MORE DETAILS SEE SHEET 29 & 38.



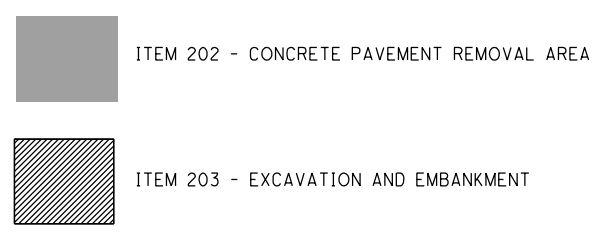
1-LANE SUPERELEVATED SECTION - RAMP "E"

STA. 202+58.92 TO STA. 202+73.92 = 15 FT.

PATCH AREA

* STA. 198+26.77 TO STA. 198+30.77
5'9"x4' PAVEMENT REMOVAL AND REPLACEMENT
SEE DETAILS ON SHEET 29.

PROP. SYMBOLS



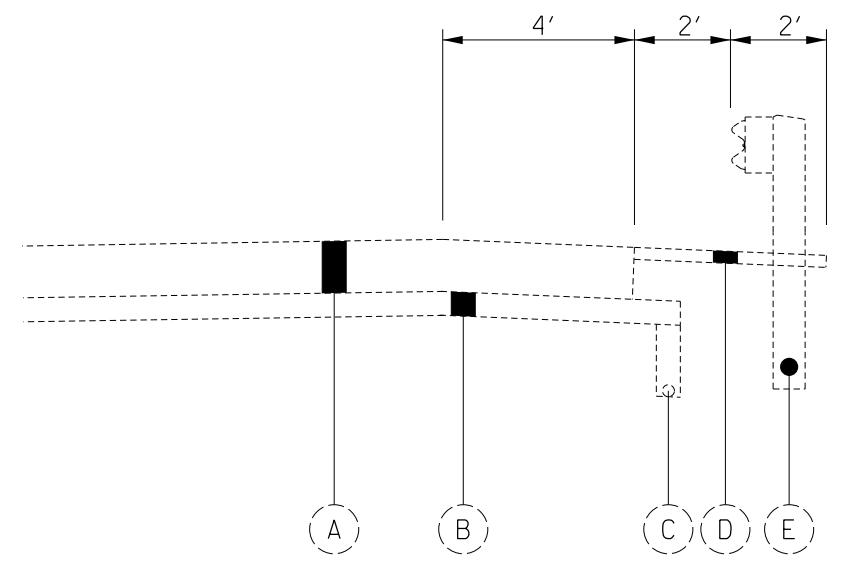
PROP. LEGEND

- ① ITEM 622 - CONCRETE BARRIER, TYPE D, AS PER PLAN
- ② ITEM 202 - PAVEMENT REMOVED
- ③ ITEM 452 - 13" NON-REINFORCED CONCRETE PAVEMENT
- ④ STANDARD LONGITUDINAL JOINT
- ⑤ ITEM 304 - 6" AGGREGATE BASE
- ⑥ ITEM 202 - PORTION OF STRUCTURE REMOVED, AS PER PLAN

EXISTNG LEGEND

- Ⓐ ITEM 622 - CONCRETE BARRIER, TYPE D
- Ⓑ MECHANICALLY STABILIZED EARTH WALL
- Ⓒ ITEM 451 - REINFORCED CONCRETE - MOMENT SLAB
- Ⓓ ITEM 452 - VARIABLE THICKNESS PLAIN CONCRETE PAVEMENT- 17" MAX.
- Ⓔ STANDARD LONGITUDINAL JOINT
- Ⓕ ITEM 304 - 6" AGGREGATE BASE
- Ⓖ ITEM 204 - SUBGRADE COMPACTION
- Ⓗ ITEM 452 - 13" NON-REINFORCED CONCRETE PAVEMENT
- Ⓘ ITEM 605 - 6" SHALLOW PIPE UNDERDRAIN
- Ⓝ ITEM 617 - 3" COMPACTED AGGREGATE, TYPE A WITH ITEM 617 WATER, AS PER PLAN
- Ⓚ ITEM 606 - EXISTING GUARDRAIL

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FOR MORE DETAILS SEE SHEET 30.

2-LANE NORMAL SECTION - RAMP

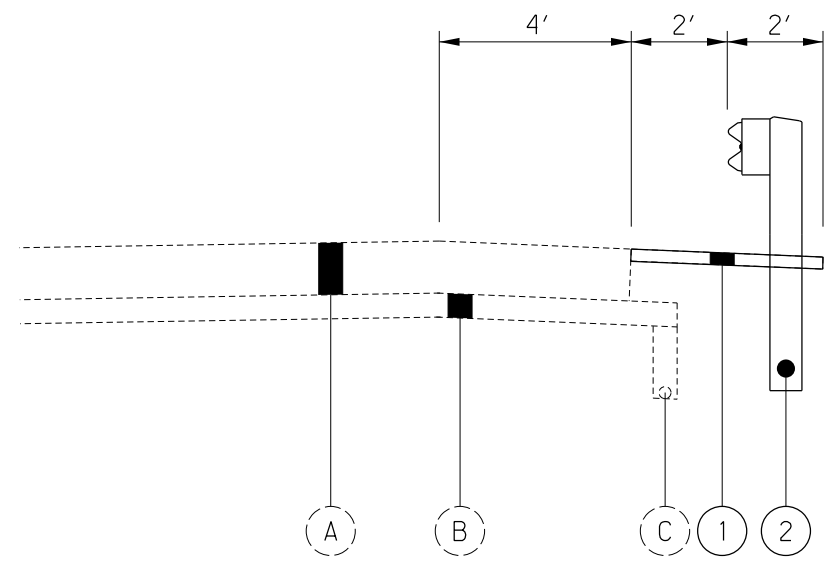
RAMP H: STA. 43+55± TO STA. 49+07± = 552 FT. (emax = 0.060, OPPOSITE HAND)

PROPOSED LEGEND

- ① ITEM 617 - 3" COMPACTED AGGREGATE
- ② ITEM 606 - GUARDRAIL, TYPE 5

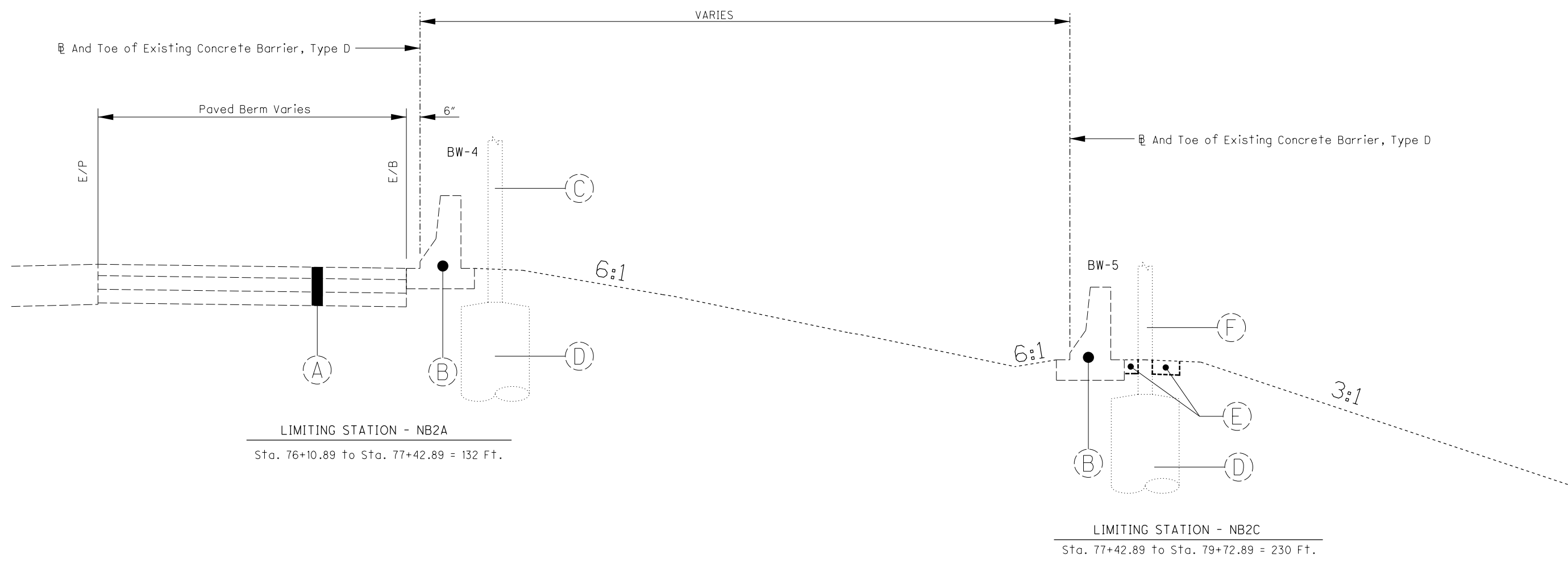
EXISTING LEGEND

- Ⓐ ITEM 452 - 13" PLAIN CONCRETE PAVEMENT
- Ⓑ ITEM 304 - 6" AGGREGATE BASE
- Ⓒ ITEM 605 - 6" SHALLOW PIPE UNDERDRAIN
- Ⓓ ITEM 617 - 3" COMPACTED AGGREGATE, TYPE A
- Ⓔ ITEM 606 - GUARDRAIL, TYPE 5
- Ⓕ STANDARD LONGITUDINAL JOINT
- Ⓖ ITEM 203 - SUBGRADE COMPACTION



2-LANE NORMAL SECTION - RAMP

RAMP H: STA. 39+22± TO STA. 44+05± = 483 FT (emax = 0.060, OPPOSITE HAND)



LIMITING STATION - NB2A
Sta. 76+10.89 to Sta. 77+42.89 = 132 Ft.

LIMITING STATION - NB2C
Sta. 77+42.89 to Sta. 79+72.89 = 230 Ft.

EXISTING LEGEND

- (A) 5" Asphalt on 6" Bituminous on 6" subbase
- (B) Existing concrete barrier, Type D
- (C) Existing Noise Barrier Wall - NB2A
- (D) Existing Noise Barrier Wall Foundation
- (E) Existing Aggregate
- (F) Existing Noise Barrier Wall - NB2C

PROPOSED LEGEND

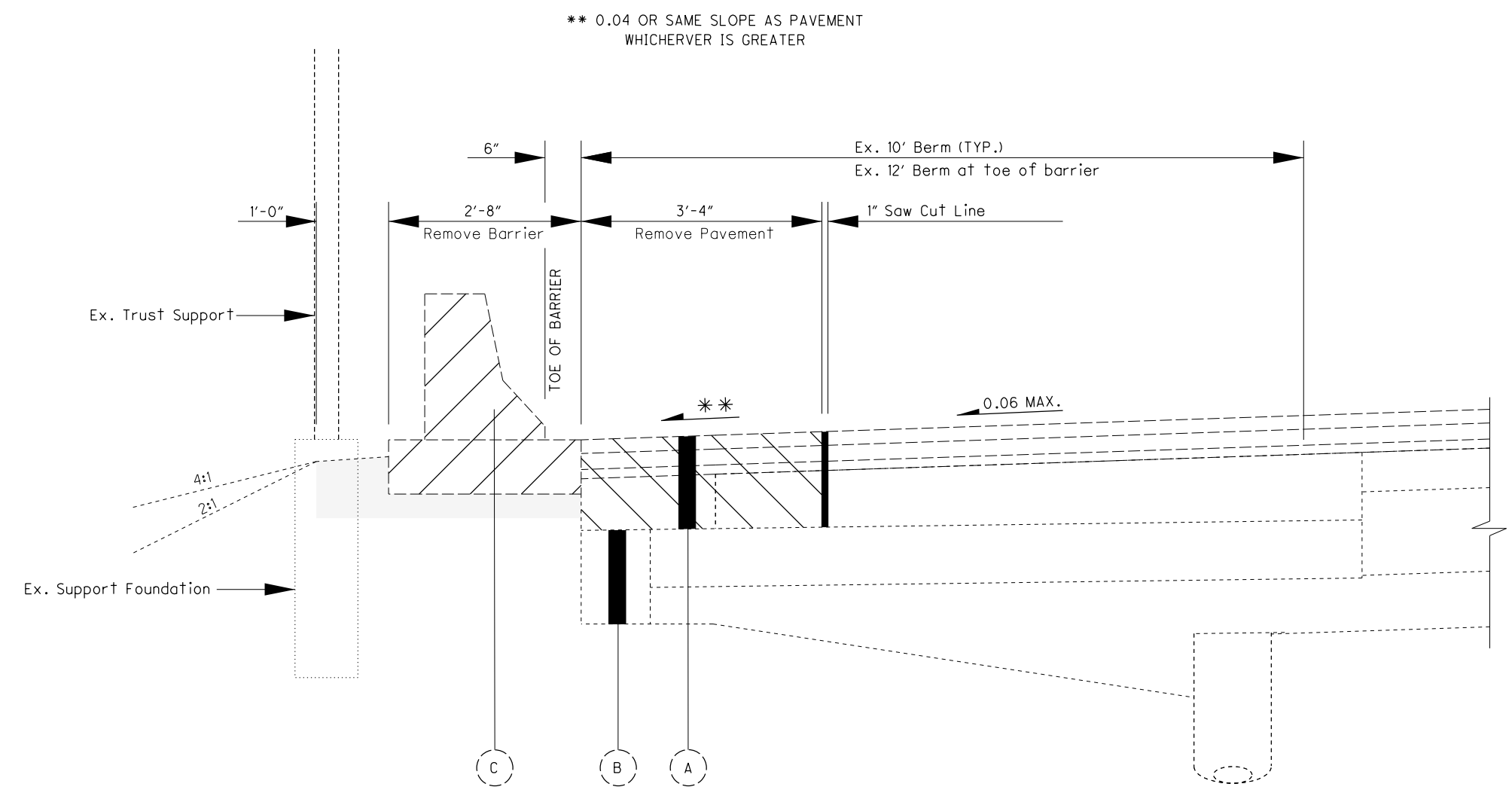
- ① ITEM 202 - PAVEMENT REMOVED, ASPHALT
- ② ITEM 304 - 4" AGGEGATE BASE
- ③ ITEM 622 - 32" CONCRETE BARRIER, TYPE D, AS PER PLAN
- ④ ITEM 203 - EXCAVATION
- ⑤ ITEM 203 - EMBANKMENT
- ⑥ ITEM 659 - SEEDING AND MULCHING
- ⑦ ITEM 622 - 32" CONCRETE BARRIER, TYPE D
- ⑧ ITEM 201 - CLEARING AND GRUBBING

FOR PROPOSED DETAILS NOT SHOWN SEE SHEET 41.

ALL STATIONS, MEASUREMENTS, AND OFFSETS ARE FROM EXISTING METRIC
PLAN MOT-75-19.602, AND THEREFORE SHALL BE CONSIDERED ±.

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EXISTING LEGEND

- (A) EXISTING 1 1/2" ASPHALT CONCRETE
- (B) EXISTING 10" AGGREGATE BASE (DND)
- (C) EXISTING CONCRETE BARRIER

PROPOSED LEGEND

- (1) ITEM 622, CONCRETE BARRIER, SINGLE SLOPE, AS PER PLAN
- (2) ITEM 301, 6" ASPHALT CONCRETE BASE
- (3) ITEM 304, 4" AGGREGATE BASE
- (4) ITEM 204, SUBGRADE COMPACTION
- (5) ITEM 516, JOINT SEALER

FOR PROPOSED DETAILS AND QUANTITIES NOT SHOWN SEE SHEET 43.

- AREA OF EXCAVATION
- AREA OF PAVEMENT REMOVED
- AREA OF EXISTING BARRIER REMOVED
- AREA OF EMBANKMENT

UTILITIES

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

TELEPHONE

AT&T 3233 WOODMAN DR. DAYTON, OHIO 45420 ELMER REYNOLDS 937-296-3552	FRONTIER COMMUNICATION 6464 WESTBROOK RD. CLAYTON, OHIO 45315 CHARLES BERNACCHI 937-833-1468 CELL: 541-390-3910
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ELECTRIC

DAYTON POWER & LIGHT
1900 DRYDEN ROAD
DAYTON, OHIO 45439
PHONE: 937-331-4860
TOLL FREE 1-800-424-5578

GAS

VECTREN
6500 CLYO ROAD
CENTERVILLE, OHIO 45459
DON SPECHT
937-312-2533

CABLE

TIME WARNER CABLE 3691 TURNER ROAD DAYTON, OHIO 45415 TIM KUSS 937-425-8850	LEVEL 3 COMMUNICATIONS 226 N. 5TH ST., SUITE 100 COLUMBUS, OHIO 43215 JARAMINE MYERS 740-275-1133
---	---

SANITARY AND WATER

DAYTON CITY WATER & SEWER 320 W. MONUMENT ST. DAYTON, OHIO 45402 937-333-3737	CITY OF VANDALIA 333 JAMES BOHANAN DR. VANDALIA, OHIO 45377 JON CRUSEY 937-415-2254
--	---

TRI CITIES NORTH REGIONAL WASTEWATER
3777 OLD NEEDMORE ROAD
DAYTON, OHIO 45424
DAVID HECKLER
937-233-7083

EXISTING PLANS

EXISTING PLANS ENTITLED MOT-70-22.890, MOT-75-25.780, AND MOT-4-19.14, MAY BE INSPECTED IN THE ODOT DISTRICT 7 OFFICE IN SIDNEY, OHIO.

PROFILE AND ALIGNMENT

PLACE ALL PROPOSED PAVEMENT, AND ROADWAY ITEMS TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED BARRIER WALLS AS INDICATED WITHIN THESE PLANS ACCORDINGLY.

ITEM 201. CLEARING AND GRUBBING

THE INTENT OF THIS ITEM OF WORK IS CLEARING, GRUBBING, AND REMOVING DISCARDED CONSTRUCTION DEBRIS FROM PREVIOUS PROJECTS IN ACCORDANCE WITH THE 2013 CM&S, SEC. 201.01. ALTHOUGH THERE ARE NO TREES OR STUMPS 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 201, CLEARING AND GRUBBING LUMP

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.

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 659. SEEDING AND MULCHING

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. THE INTENT FOR THESE QUANTITIES ARE TO REPAIR BACK TO ITS ORIGINAL CONDITION ANY DISTURBED OR DAMAGED AREAS DUE TO THE CONSTRUCTION WORK TO COMPLETE THIS PROJECT. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO CONFINE THE WORK, IN ORDER TO MINIMIZE THE DAMAGED AREAS.

QUANTITIES PER LOCATION:

MOT-4-(18.40-18.44) @ RAMP "F" TO VALLEY ST.	** 20 SY.
MOT-75-(16.20-16.26) NB @ KEENAN AVE.	** 25 SY.
MOT-75-(20.30-20.55) @ RAMP "E"	* 112 SY.
TOTAL ITEM 659, SEEDING & MULCHING	157 SY.

* CLASS 2 - QUANTITY PULLED FROM CROSS-SECTIONS
** CLASS 3B

ITEM 659, REPAIR SEEDING AND MULCHING
(157x(5+100)) = 7.85 OR 8 SY.

ITEM 659, COMMERCIAL FERTILIZER
8x9x(20+1000)x(1+2000)) = 0.0007 OR .02 TON

ITEM 659, WATER
(157x9x300x2x(1+1000)+
(8x9x300x(1+1000))) = 869.4 OR 1 M GAL.

ITEM 202. PORTION OF STRUCTURE REMOVED, AS PER PLAN

THE LOCATION FOR THIS ITEM OF WORK SHALL BE MOT-70/75 INTERCHANGE AT RAMP "E", SHOWN IN THESE PLANS AS R-1, AND R-2. REMOVAL SHALL BE AS SHOWN IN DETAILS, AND IN ACCORDANCE WITH 2013 CM&S AND CURRENT CONSTRUCTION STANDARDS. ALL LABOR, EQUIPMENT, MATERIAL, AND INCIDENTALS NECESSARY TO COMPLETE THESE ITEMS OF WORK SHALL BE INCLUDED IN THE CONTRACT BID PER EACH FOR ITEM 202, PORTION OF STRUCTURE REMOVED, AS PER PLAN.

ITEM 613. LOW STRENGTH MORTAR BACKFILL

THE INTENT OF THIS ITEM IS TO BE USED TO BACKFILL A POTENTIAL VOID WITHIN THE PAVEMENT SUPPORT. A QUANTITY HAS BEEN CARRIED TO THE ESTIMATED QUANTITIES ON SHEET 28. THE USE OF THIS ITEM SHALL BE AS DIRECTED BY THE ENGINEER.

ITEM 622. CONCRETE BARRIER, TYPE D, AS PER PLAN

THE INTENT OF THIS ITEM SHALL BE TO MODIFY A PORTION OF TWO EXISTING BARRIERS/MSE WALLS, AND INSTALL A PROPOSED BARRIER BETWEEN THE TWO, MARKED IN THESE PLANS AS BW-1, BW-2, AND BW-3. ALL PROPOSED WORK SHALL BE IN ACCORDANCE WITH THE 2013 CM&S, STANDARD DRAWINGS, WITH THE EXCEPTION OF A MOMENT SLAB MODIFICATION ADDED TO THE NEW PROPOSED SECTION (BW-2) OF BARRIER WALL AS SHOWN IN THESE PLANS. ALL MODIFICATIONS EXCEPT REINFORCING STEEL SHALL BE INCLUDED IN THE COST OF THIS ITEM. ALL WORK, LABOR, EQUIPMENT, TOOLS, AND MATERIALS NECESSARY TO CONSTRUCT THESE BARRIERS, SHALL BE PAID FOR UNDER THE UNIT PRICE BID PER FOOT, FOR ITEM 622, CONCRETE BARRIER, TYPE D, AS PER PLAN. (LOCATION "RAMP E" AT IR 70 AND IR 75)

ITEM 622. CONCRETE BARRIER, TYPE D, AS PER PLAN

THE INTENT OF THIS ITEM SHALL BE TO INSTALL A PROPOSED BARRIER, MARKED IN THESE PLANS AS BW-4. ALL PROPOSED WORK SHALL BE IN ACCORDANCE WITH THE 2013 CM&S, STANDARD DRAWINGS, WITH THE EXCEPTION THAT THE 6" AREA WHERE EXISTING PAVEMENT WAS REMOVED SHALL BECOME PART OF THE NEW BARRIER. ALL MODIFICATIONS AND REINFORCEMENT SHALL BE INCLUDED IN THE COST OF THIS ITEM. ALL WORK, LABOR, EQUIPMENT, TOOLS, AND MATERIALS NECESSARY TO CONSTRUCT THIS BARRIER, SHALL BE PAID FOR UNDER THE UNIT PRICE BID PER FOOT, FOR ITEM 622, CONCRETE BARRIER, TYPE D, AS PER PLAN. (LOCATION MOT-75-16.20)

ITEM 622. CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN

THE INTENT OF THIS ITEM SHALL BE TO INSTALL A PROPOSED BARRIER, MARKED IN THESE PLANS AS BW-7. ALL PROPOSED WORK SHALL BE IN ACCORDANCE WITH THE 2013 CM&S, STANDARD DRAWINGS, WITH THE EXCEPTION THAT AN ADDITIONAL 40" SHALL BE ADDED TO THE BASE OF THE BARRIER, AS SHOWN IN THESE PLANS. ALL MODIFICATIONS EXCEPT FOR THE REINFORCEMENT WITHIN THE BASE, SHALL BE INCLUDED IN THE COST OF THIS ITEM. ALL WORK, LABOR, EQUIPMENT, TOOLS, AND MATERIALS NECESSARY TO CONSTRUCT THIS BARRIER, SHALL BE PAID FOR UNDER THE UNIT PRICE BID PER FOOT, FOR ITEM 622, CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN. (LOCATION MOT-4-18.40)

ITEM 622. CONCRETE BARRIER, END SECTION, TYPE D, AS PER PLAN

THE INTENT OF THIS ITEM SHALL BE TO INSTALL A PROPOSED CONCRETE BARRIER END SECTION, TYPE D, AS SHOWN IN THESE PLANS. LOCATION FOR THE END SECTIONS WILL BE AT BOTH ENDS OF THE CONCRETE BARRIER MARKED IN THESE PLANS AS BW-7. ALL PROPOSED WORK SHALL BE IN ACCORDANCE WITH THE 2013 CM&S, STANDARD DRAWINGS, WITH THE EXCEPTION THAT AN ADDITIONAL 40" SHALL BE ADDED TO THE BASE OF THE BARRIER, AS SHOWN IN THESE PLANS. ALL MODIFICATIONS EXCEPT FOR REINFORCEMENT IN THE BASE, SHALL BE INCLUDED IN THE COST OF THIS ITEM. ALL WORK, LABOR, EQUIPMENT, TOOLS, AND MATERIALS NECESSARY TO CONSTRUCT THESE BARRIER, END SECTIONS, AND SHALL BE PAID FOR UNDER THE UNIT PRICE BID PER FOOT, FOR ITEM 622, CONCRETE BARRIER, END SECTION, TYPE D, AS PER PLAN. (LOCATION MOT-4-18.40)

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

ITEM 304 - AGGREGATE BASE

THE INTENT OF THIS ITEM SHALL BE TO REPAIR/REPLACE ANY BASE MATERIAL LOSS DUE TO UNDERMINING THAT MAY OCCUR DURING EXCAVATION WORK ON "RAMP E". A QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY, TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 304, AGGREGATE BASE 16 CU. YD.

CALCULATED
REB
CHECKED
TMK

GENERAL NOTES

MOT-VAR VAR

GENERAL REQUIREMENTS

IT IS THE INTENTION TO PERFORM THE REQUIRED WORK WITHIN THESE PLANS WITH THE LEAST INCONVENIENCE TO AND THE MAXIMUM SAFETY OF THE CONTRACTOR AND THE TRAVELING PUBLIC. THE REQUIREMENTS FOR MAINTAINING TRAFFIC AS SPECIFIED IN THE "OHIO MANUAL OF UNIFORMED TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (CURRENT EDITION, LATEST REVISION), PERTINENT PROVISIONS OF THE "OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS" (INCLUDING SUPPLEMENTAL SPECIFICATIONS) AND APPLICABLE STANDARD CONSTRUCTION DRAWINGS SHALL APPLY TO THIS PROJECT IN ADDITION TO THE FOLLOWING NOTES AND DETAILS.

ITEM 614, MAINTAINING TRAFFIC

THE FOLLOWING WORK SHALL BE PERFORMED:

EXTEND EXISTING GUARDRAIL ALONG RAMP "H", USING TYPE 5 GUARDRIAL AS SHOWN IN THESE PLANS.

ON RAMP "E" REMOVE EXISTING GUARDRAIL, AND END TERMINAL ASSEMBLIES BETWEEN BARRIER WALL #5 AND BARRIER WALL #6

ON RAMP "E" REMOVE BARRIER WALL TRANSITION ENDS FROM EXISTING BARRIER WALL #5, AND EXISTING BARRIER WALL #6, AS SHOWN IN THESE PLANS.

EXCAVATE AND PREPARE AREA AND CONSTRUCT NEW BARRIER WALL ALONG RAMP "E", BETWEEN EXISTING BARRIER WALL #5 AND BARRIER WALL #6, AS SHOWN IN THESE PLANS.

FOR WORK ON RAMP "E", TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 21 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED, AS SHOWN ON SHEET 13. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$11,000 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

REMOVE SECTIONS OF EXISTING CONCRETE BARRIER ALONG IR-75, JUST SOUTH OF KEENAN ROAD. PREPARE A NEW BED, AND INSTALL NEW CONCRETE BARRIER AS IDICATED IN THESE PLANS AND DETAILS, INCLUDING THE CLEARING AND GRUBBING OF OVER GROWTH AND DISCARDED CONSTRUCTION MATERIALS BETWEEN NOISE WALLS NB2A AND NB2C.

REMOVE EXISTING CONCRETE BARRIER SIGN PROTECTION ALONG MOT-4, AT RAMP "F" TO VALLEY STREET. TO INCLUDE REMOVAL OF SECTIONS OF EXISTING GUARDRAIL. PREPARE THE AREA AND INSTALL NEW CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN, AS SHOWN IN THESE PLANS AND DETAILS. REPLACE GUARDRAIL AS SHOWN WITH NEW MGS GUARDRIAL ITEMS.

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
DAYTON AIR SHOW	

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:

ITEM 614, MAINTAINING TRAFFIC (continued)

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY (THANKSGIVING ONLY)	6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

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

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.

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD OR RAMP CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48 X 30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN SCD MT-101.60 AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC:

RAMP CLOSURE SIGN PLACEMENT SHALL BE BETWEEN AIRPORT ACCESS ROAD AND NORTH DIXIE DRIVE.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES OF THE TYPE AND LOCATION AS FOLLOWS:

AT THE GORE AREA OF RAMP "E" (EASTBOUND 70 TO NORTHBOUND 75)

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 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.

PERMITTED LANE CLOSURE TIMES

LANE CLOSURES SHALL ONLY BE IMPLEMENTED AT THE TIMES LISTED ON THE OHIO DEPARTMENT OF TRANSPORTATION'S PERMITTED LANE CLOSURE WEB SITE WHICH IS LOCATED AT:

<http://plcm.dot.state.oh.us/>

THE PERMITTED LANE CLOSURE TIMES LISTED ON THE WEBSITE, 14 CALENDAR DAYS PRIOR TO THE BID LETTING DATE, SHALL BE IN EFFECT FOR THIS PROJECT.

NO WORK WITHIN ACTIVE TRAVEL LANES OR WHICH WILL SLOW TRAFFIC IS PERMITTED AT ANY OTHER TIMES.

IF THE CONTRACTOR VIOLATES THE BEGINNING OR ENDING TIMES OR FAILS TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$50 FOR EACH MINUTE THE REQUIREMENTS ARE VIOLATED.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE (OFFICE OF MATERIALS MANAGEMENT WEB PAGE). THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 650 FEET AND 475 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. The PCMS shall be delineated in accordance with C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET(S) OF THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 2 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN (continued)

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE. THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.)

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE TO THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 1 SIGN MONTH

CALCULATED
REB
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MAINTENANCE OF TRAFFIC NOTES

MOT-VAR VAR

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 OMTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMTCD, 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 OMTCD, 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 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.

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS (continued)

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 50 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.

REPLACEMENT SIGN

FLATSHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD, CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 5 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

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.

DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT- 101.70.]

[TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT- 101.70.]

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

ITEM 614, BARRIER REFLECTOR, TYPE B 6 EACH

ITEM 614, OBJECT MARKER, ONE-WAY 6 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.

REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 10 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (BIDIRECTIONAL)

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

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.

REMOVAL OF EXISTING PAVEMENT MARKINGS

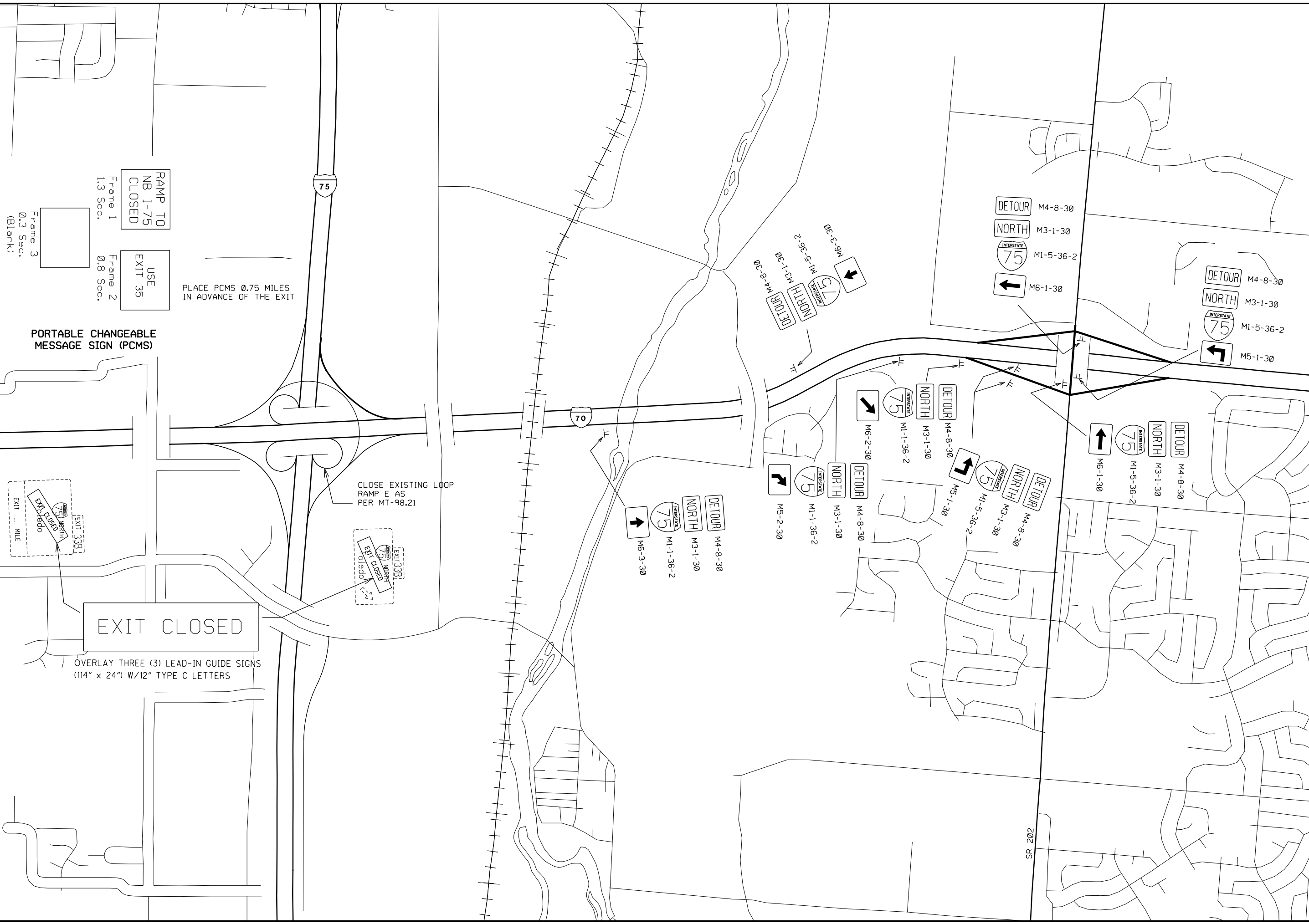
THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED MAINTENANCE OF TRAFFIC SCHEME. ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM OF WORK SHALL BE INCLUDED IN THE UNIT PRICE BID LUMP FOR ITEM, MAINTAINING TRAFFIC.

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MAINTENANCE OF TRAFFIC NOTES

MOT-VAR VAR

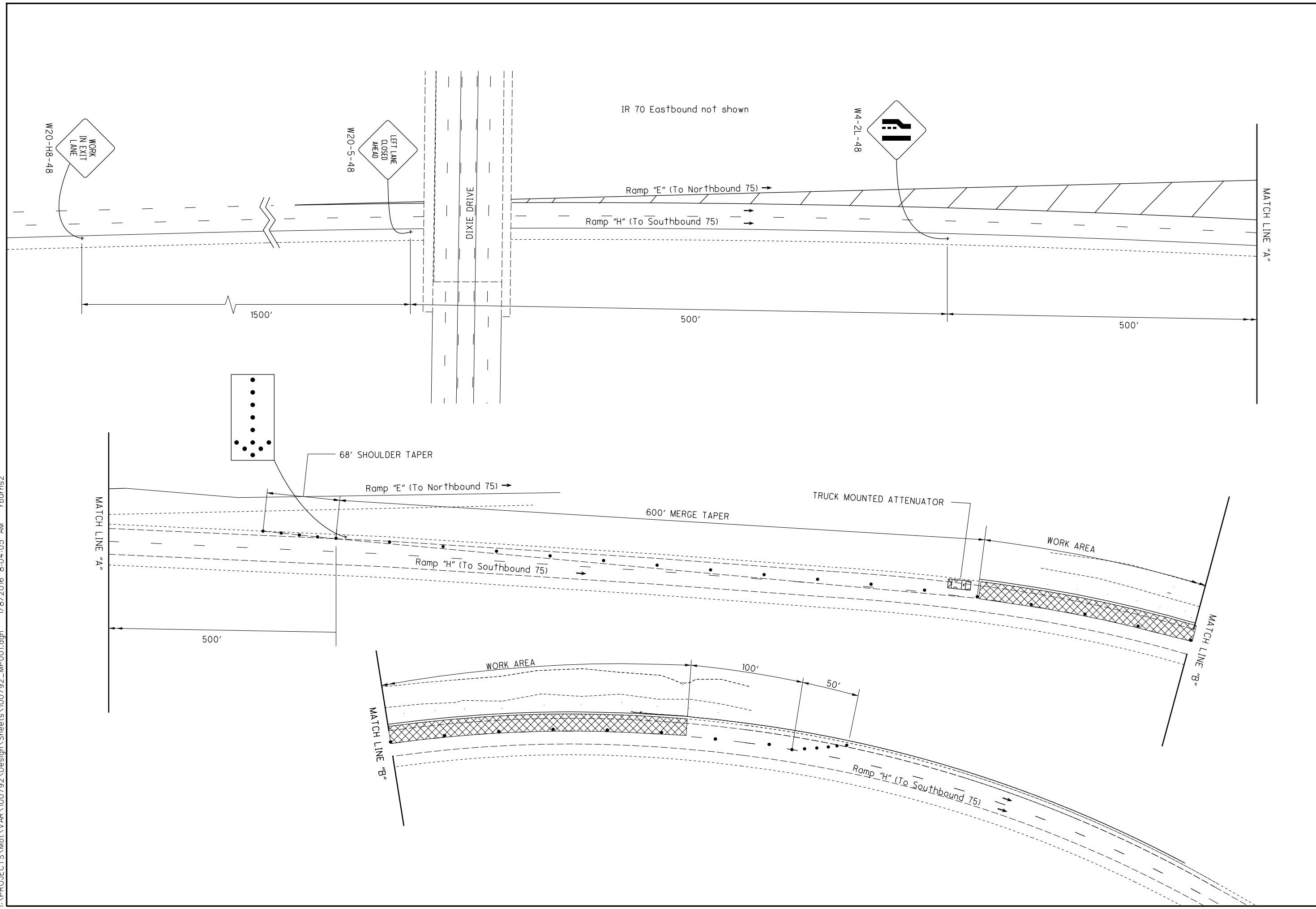


CALCULATED
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0 250 500
125
HORIZONTAL
SCALE IN FEET

DETOUR MAP - RAMP "E"
EASTBOUND 70 TO NORTHBOUND 75

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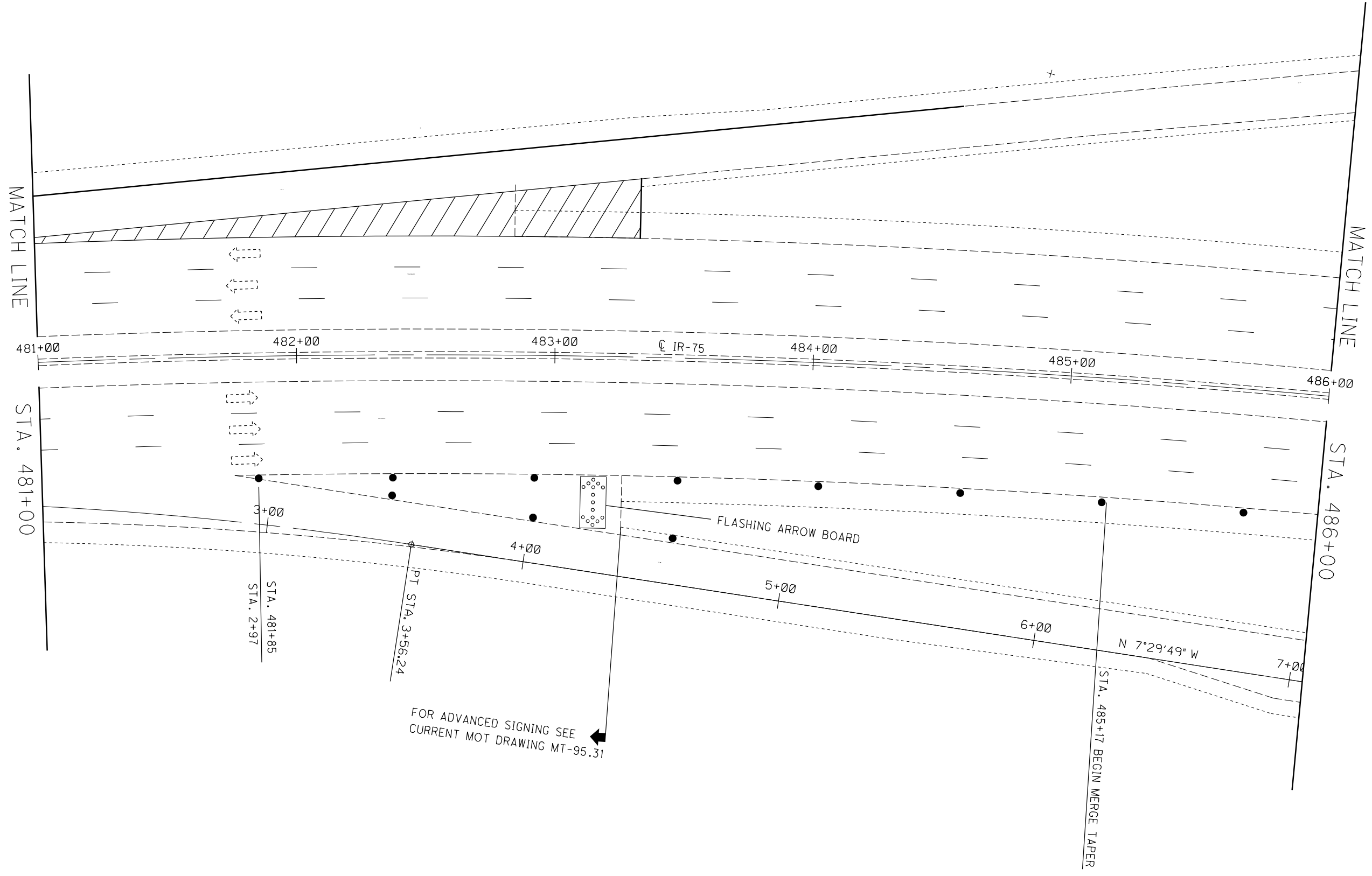


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0 20 40 80
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC
RAMP "H" - EB 70 TO SB 75**

MOT-VAR VAR

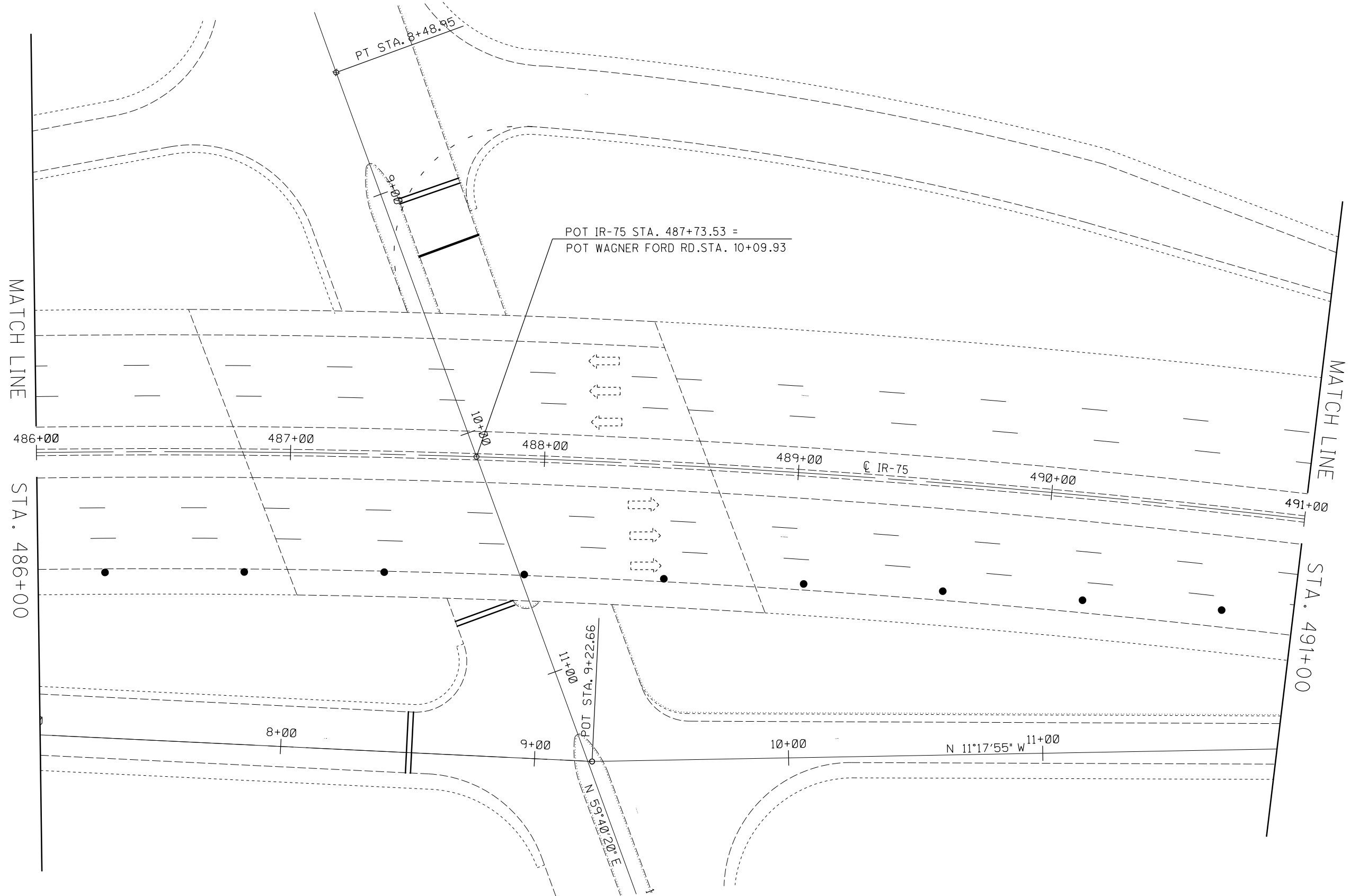


CALCULATED	REB	CHECKED	PNS

0 20 40
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC - (MOT-75-16.20)
STA. 481+00 TO STA. 486+00

MOT-VAR VAR



POT IR-75 STA. 487+73.53 =
POT WAGNER FORD RD. STA. 10+09.93

MATCH LINE

STA. 486+00

MATCH LINE

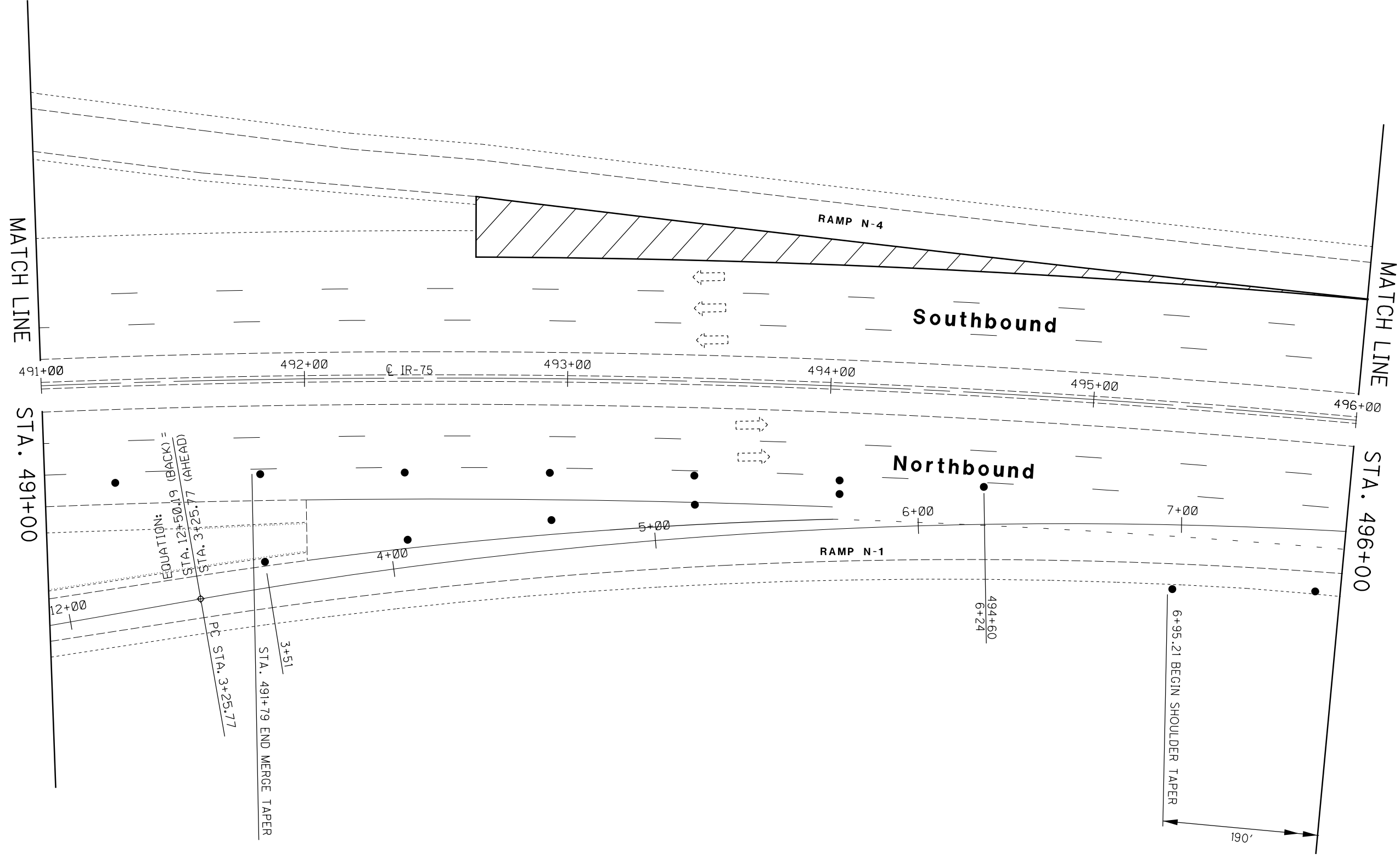
STA. 491+00



CALCULATED
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MAINTENANCE OF TRAFFIC - (MOT-75-16.20)
STA. 486+00 TO STA. 491+00

MOT-VAR VAR

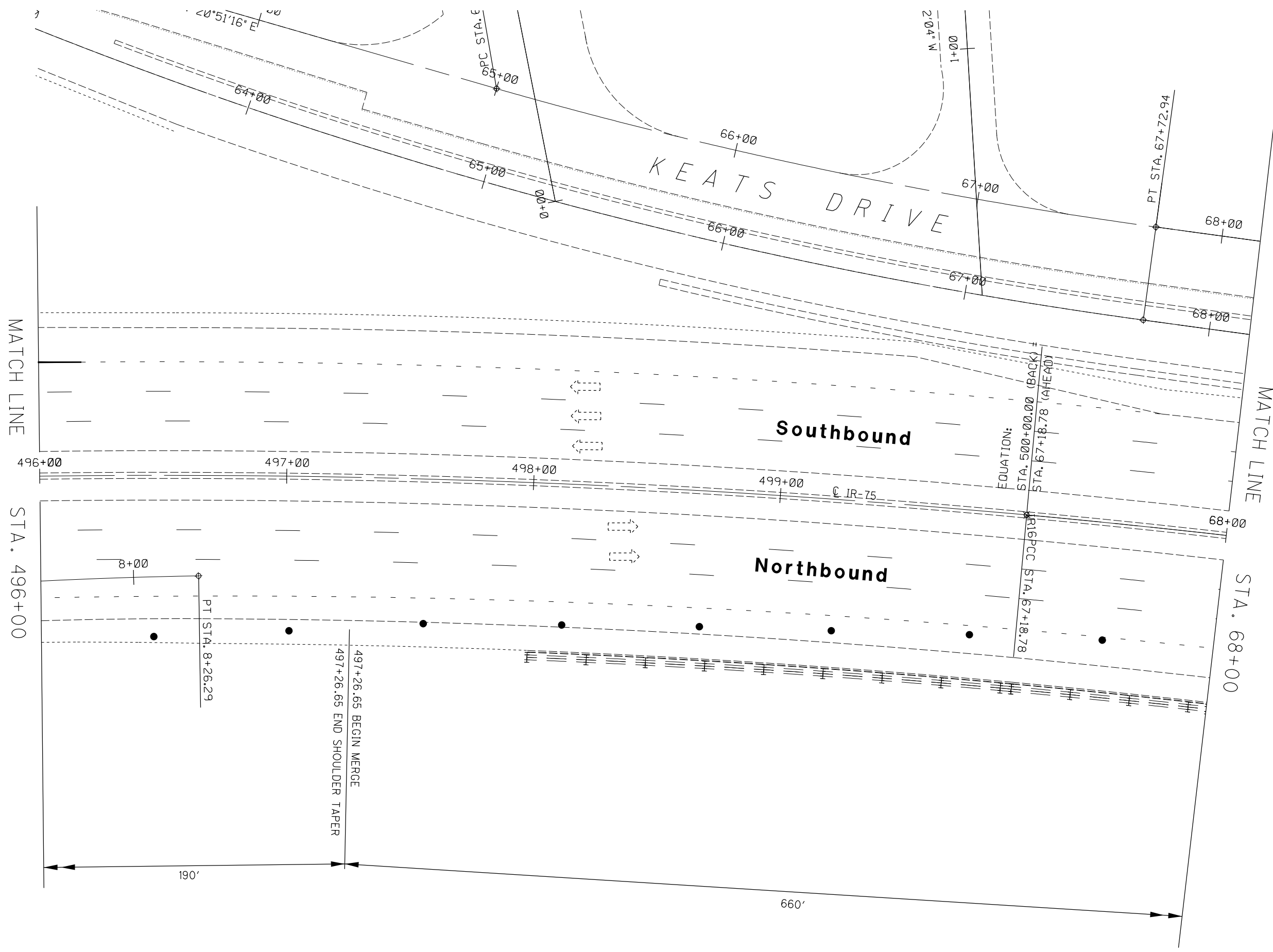


CALCULATED	REB	CHECKED	PNS

0 20 40
HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC - (MOT-75-16.20)
STA. 491+00 TO STA. 469+00

MOT-VAR VAR

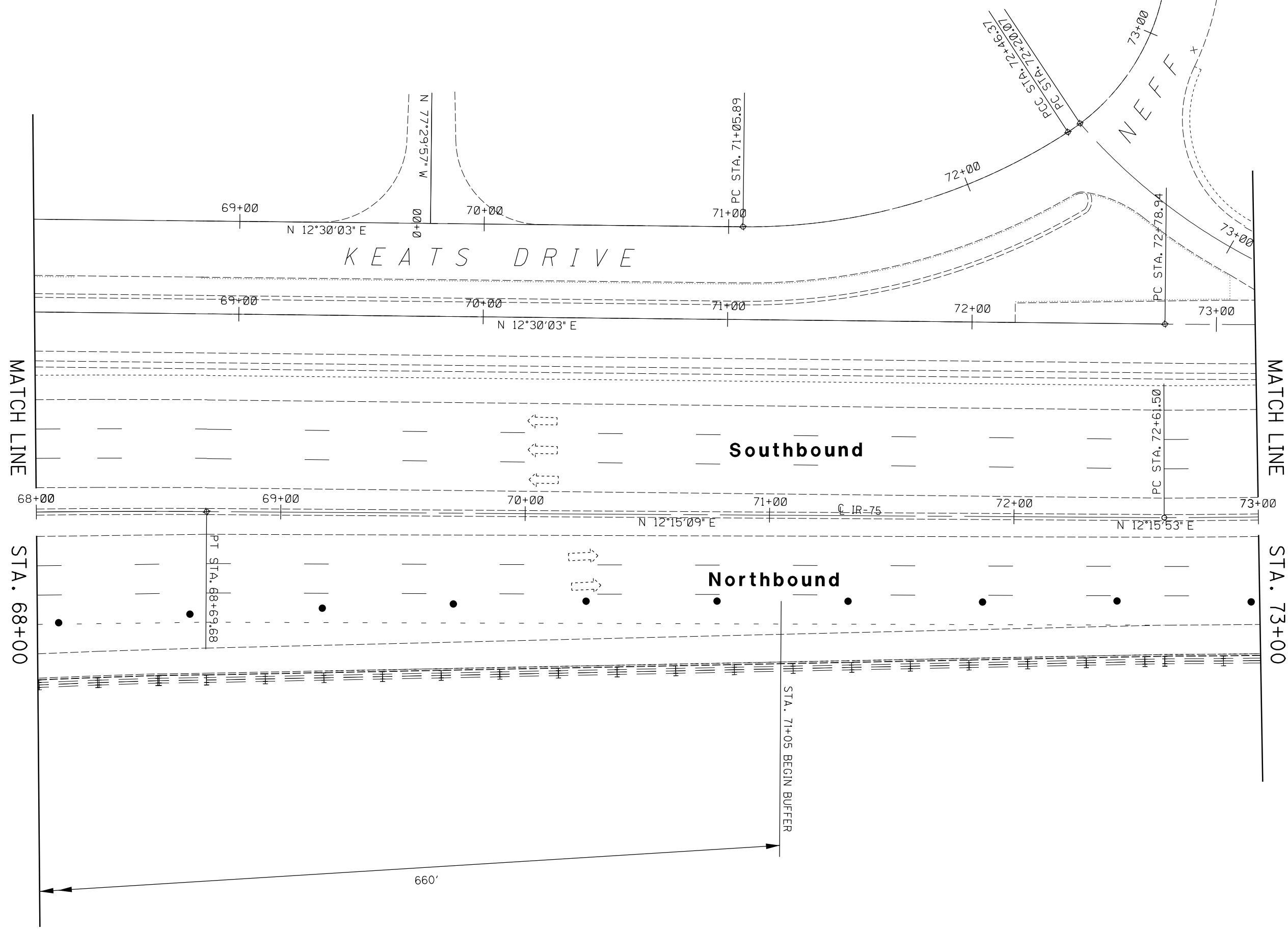


CALCULATED
REB
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PNS

0 20 40
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC - (MOT-75-16.20)
STA. 496+00 TO STA. 68+00

MOT-VAR VAR

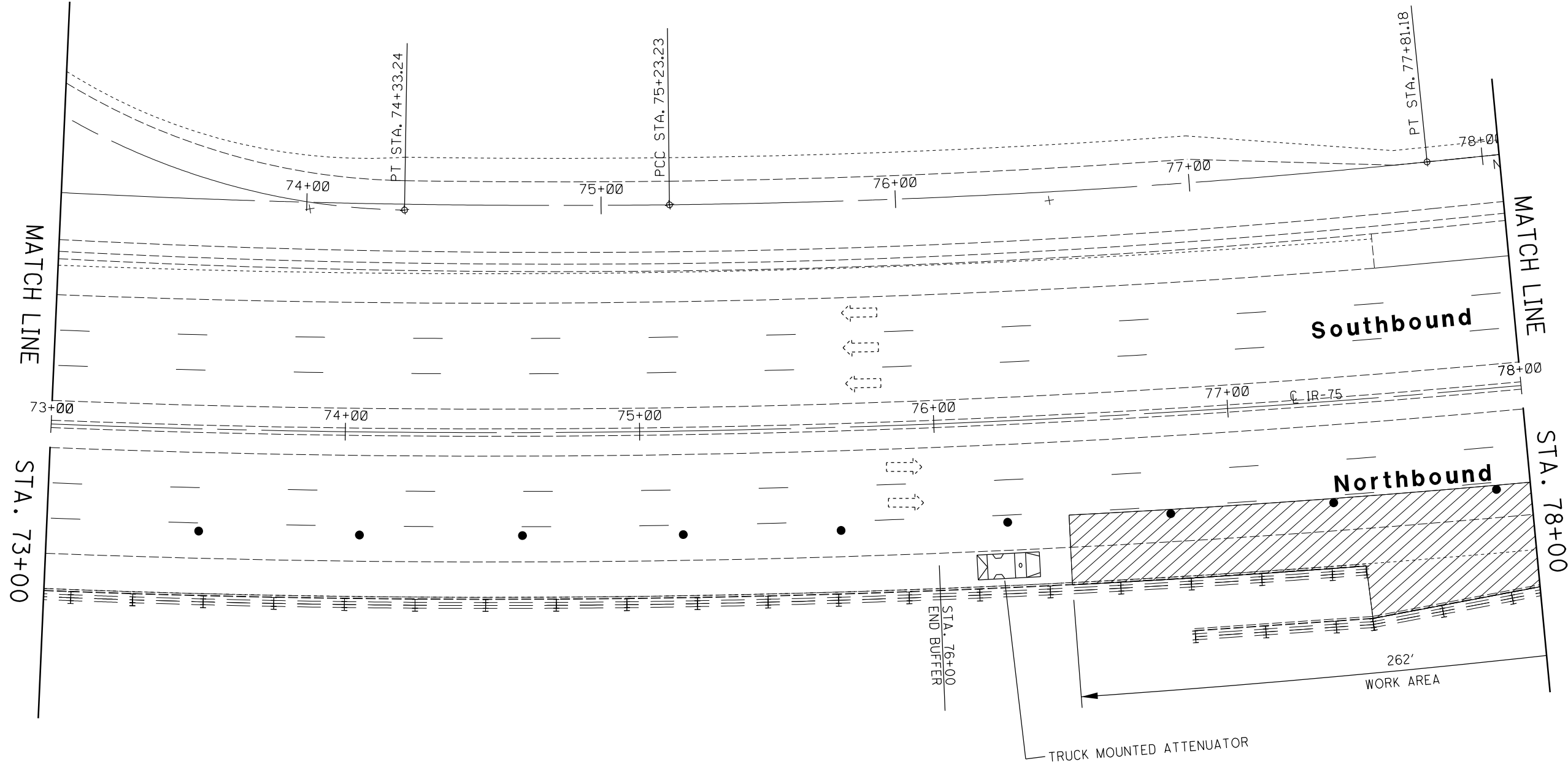


CALCULATED	REB	CHECKED	PNS

1" = 40'
HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC - (MOT-75-16.20)
STA. 68+00 TO STA. 73+00

MOT-VAR VAR



LEGEND

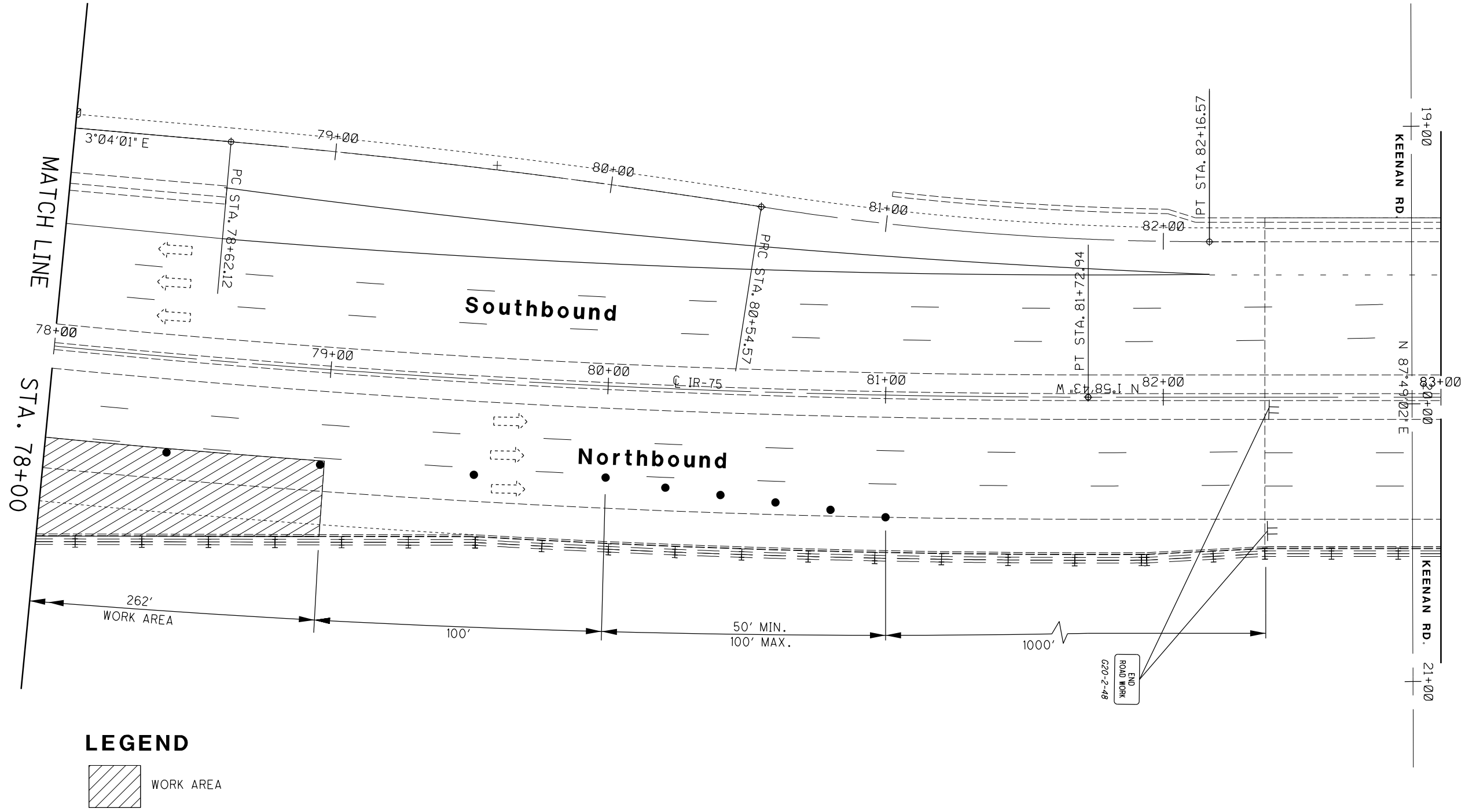


CALCULATED	REB	CHECKED	PNS

0 20 40
HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC - (MOT-75-16.20)
STA. 73+00 TO STA. 78+00

MOT-VAR VAR

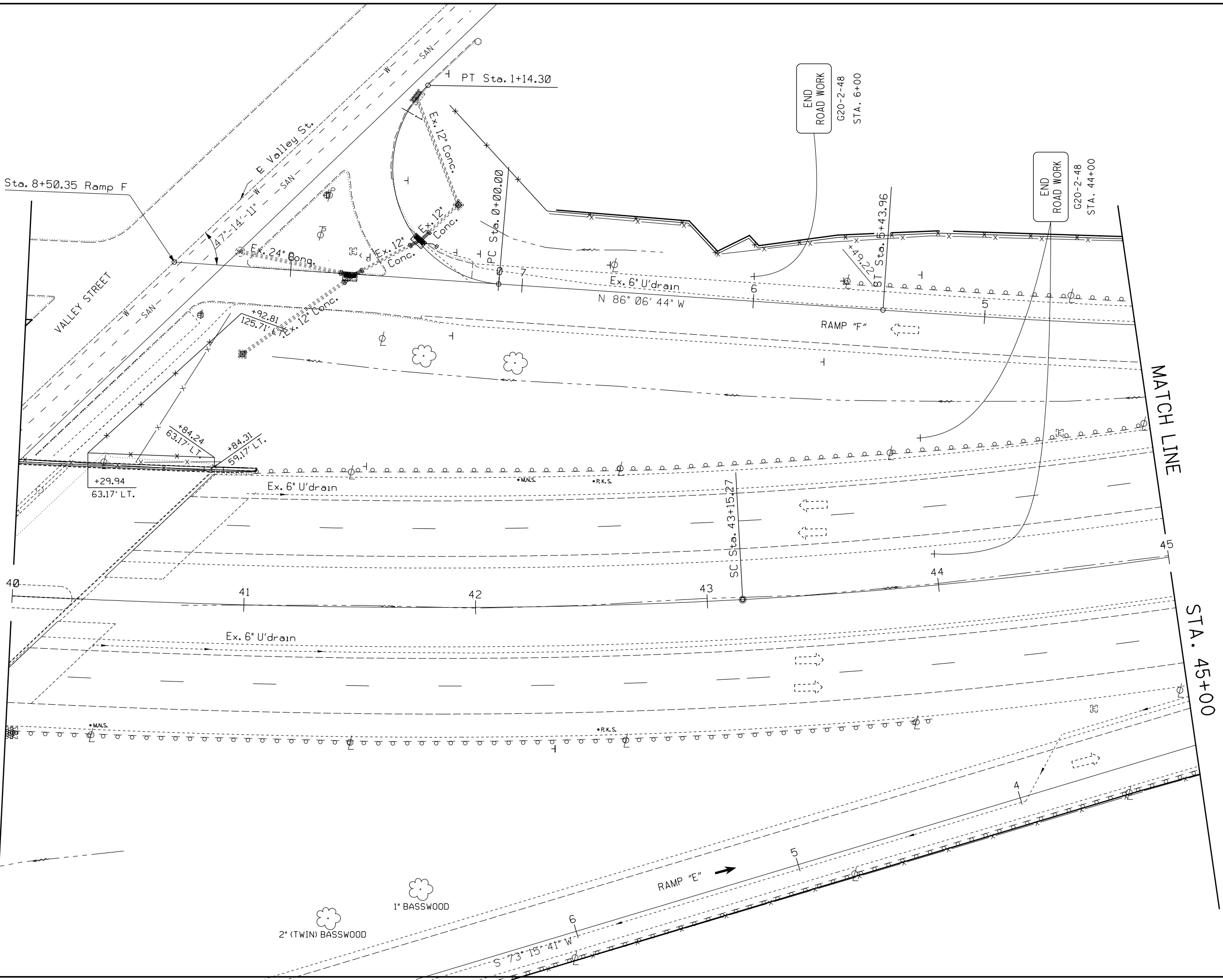


MAINTENANCE OF TRAFFIC - (MOT-75-16.20)
STA. 78+00 TO STA. 83+00

MOT-VAR VAR

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STA. 40+00



MATCH LINE

STA. 45+00

END ROAD WORK
G20-2-48
STA. 6+00

END ROAD WORK
G20-2-48
STA. 44+00

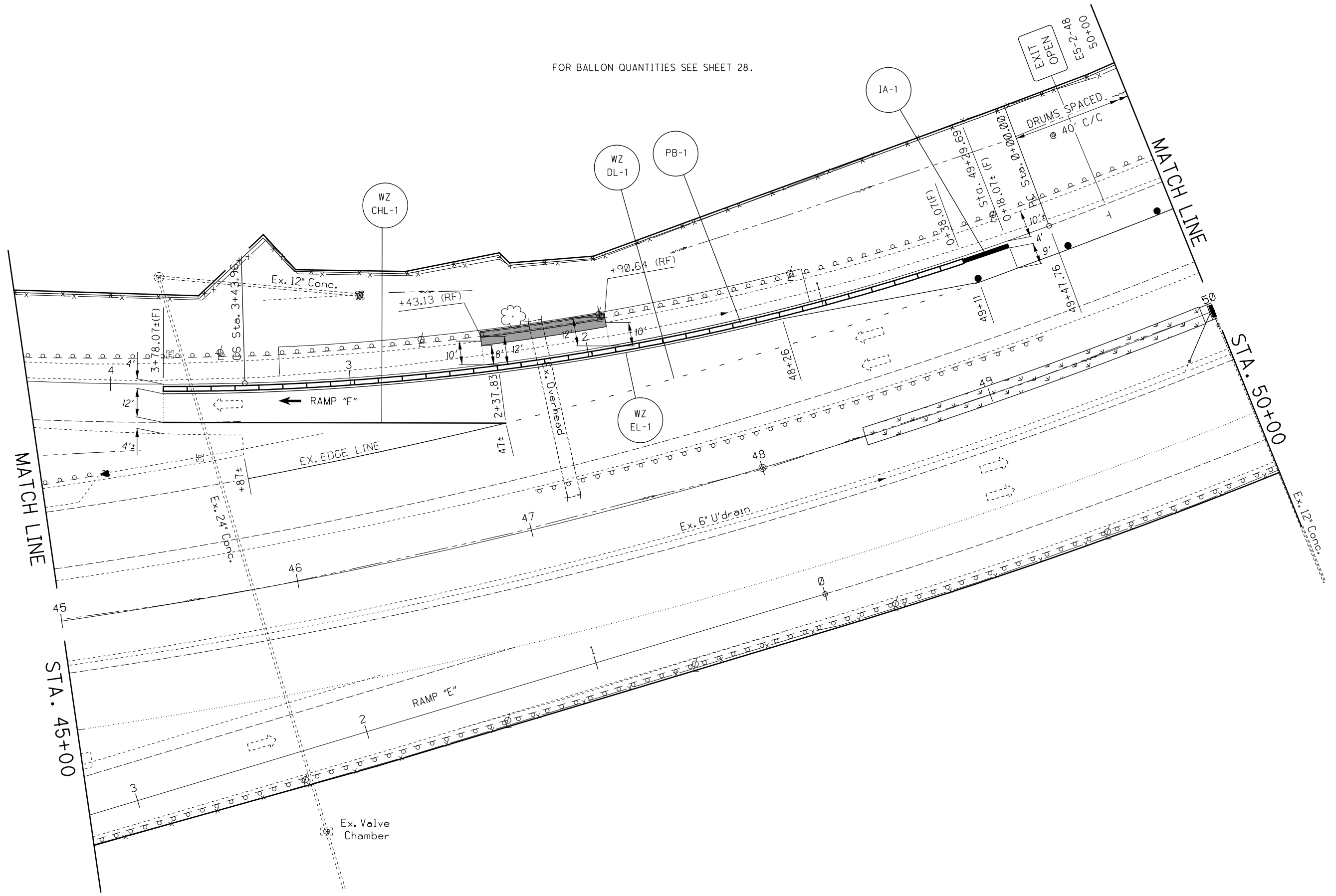
CALCULATED
REB
CHECKED
PNS

0 20 40
10
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC - MOT-4-18.40
STA. 40+00 TO STA. 45+00

MOT-VAR VAR

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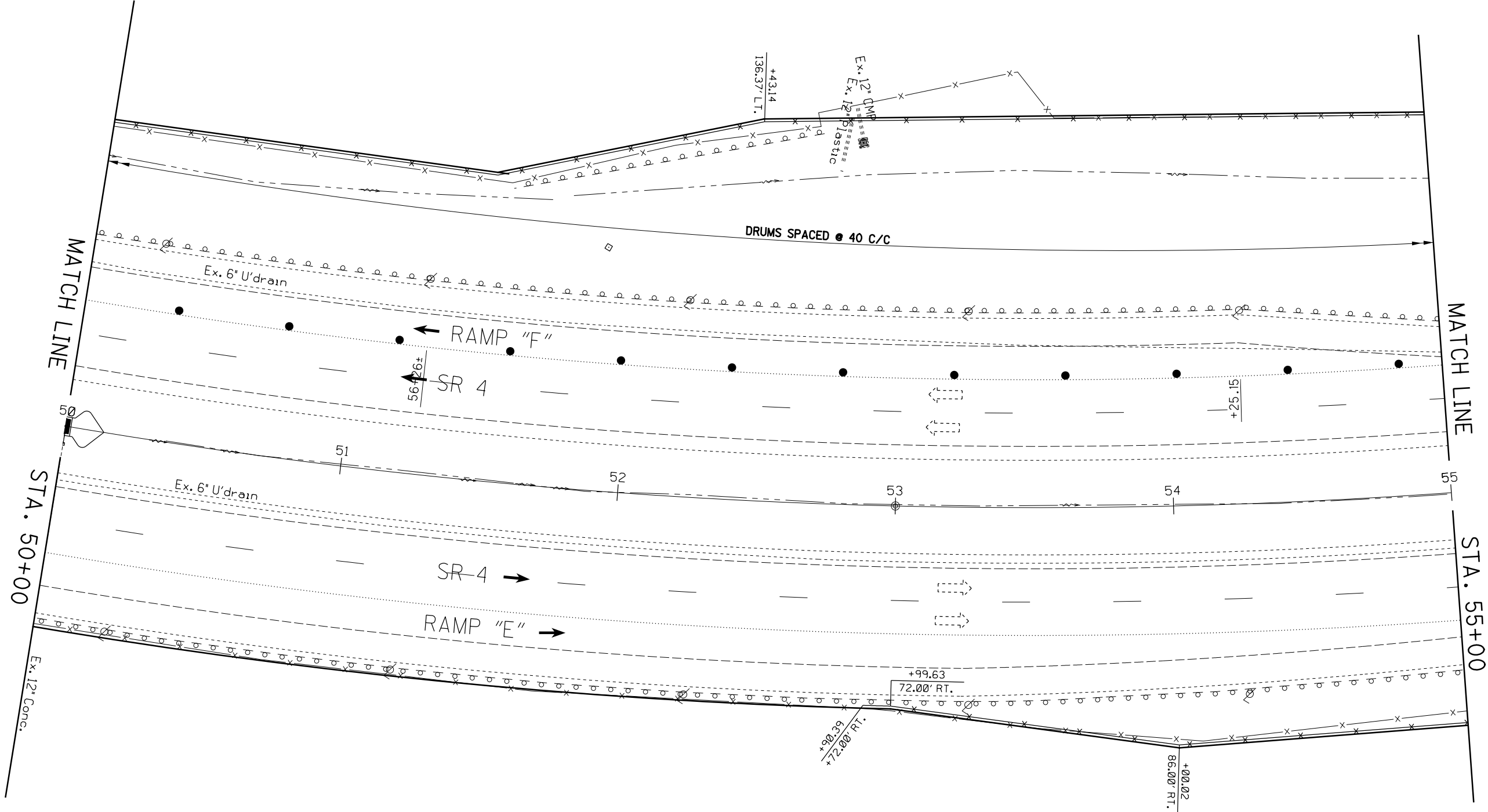
FOR BALLON QUANTITIES SEE SHEET 28.

CALCULATED
REB
CHECKED
PNS

0 20 40
10
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC - MOT-4-18.40
STA. 45+00 TO STA. 50+00

MOT-VAR VAR



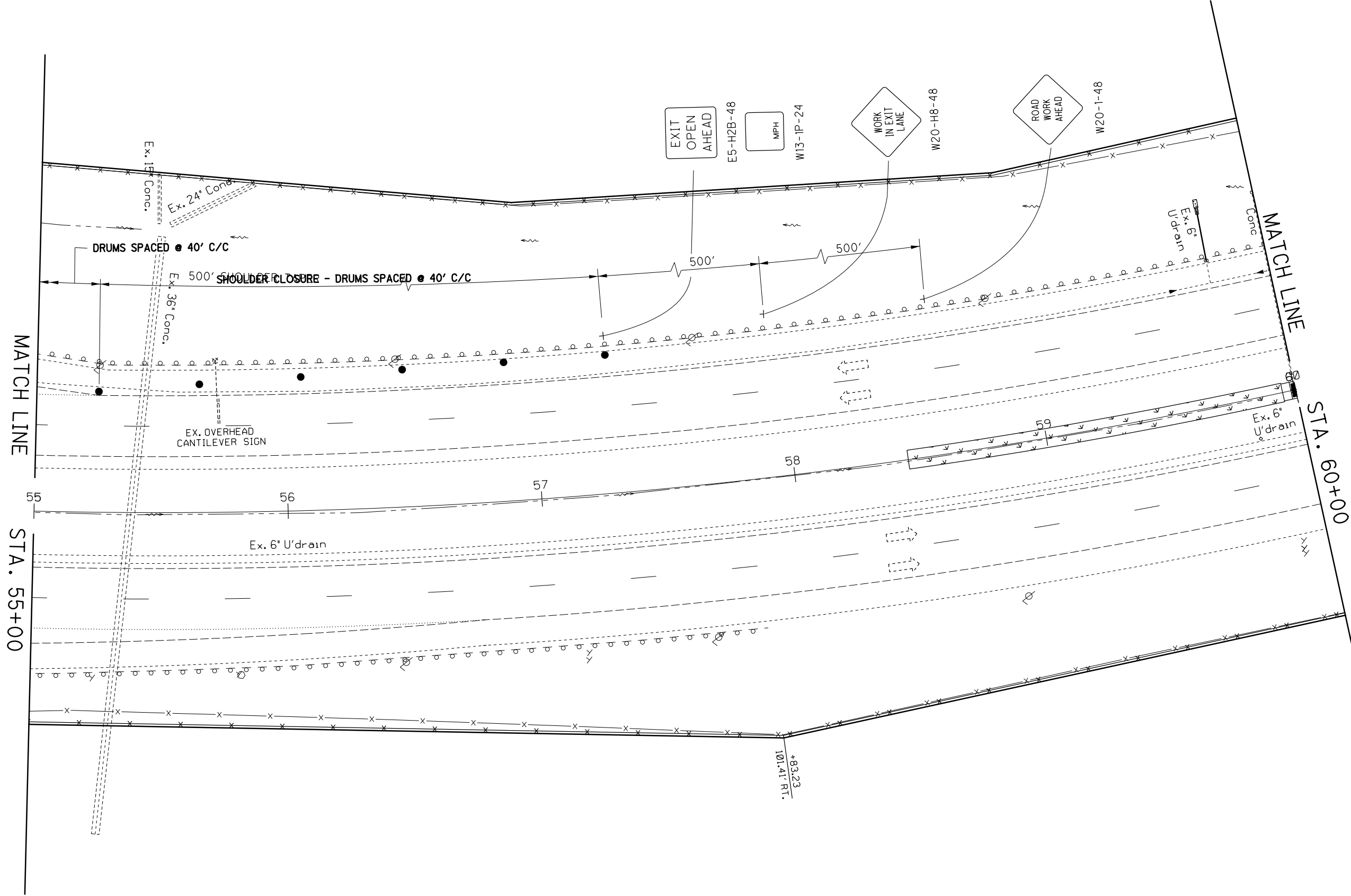
CALCULATED	REB	CHECKED	PNS

0 20 40
HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC - MOT-4-18.40
STA. 50+00 TO STA. 55+00

MOT-VAR VAR

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CALCULATED	REB	CHECKED	PNS

0 20 40
HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC - MOT-4-18.40
STA. 55+00 TO STA. 60+00

MOT-VAR VAR

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SHEET NUMBER										PARTICIPATION			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
10	11	12	28	38	43	51	01/IMS/OT	02/NHS/OT	03/IMS/BR									
ROADWAY																		
LS			LS				LS	LS		201	11000	LS						
			2				2			202	11501	2	EACH					10
			206				206			202	23000	206	SY					
			8		22		8	22		202	23010	30	SY					
			362		53		362	53		202	30700	415	FT					
			182		125		182	125		202	38000	307	FT					
			1				1			202	42010	1	EACH					
			2		2		2	2		202	47000	4	EACH					
			149				149	3		203	10000	152	CY					
			30				30	2		203	20000	32	CY					
										204	10000	38	SY					
			4		2		4	2		209	60200	6	STA					
			437.5				437.5			606	13000	437.5	FT					
					125			125		606	15100	125	FT					
			1				1			606	26100	1	EACH					
					1			1		606	35002	1	EACH					
					1			1		606	35102	1	EACH					
										609	23000	18	FT					
										622	10161	25	FT					10
			230				230			622	24000	230	FT					
			373				373			622	24001	373	FT					10
										622	25001	2	EACH					10
EROSION CONTROL																		
								10		601	21060	10	SY					
45							45			659	00510	45	SY					
112							112			659	00530	112	SY					
8							8			659	14000	8	SY					
0.02							0.02			659	20000	0.02	TON					
1							1			659	35000	1	MGAL					
									1000	832	30000	1000	EACH					
DRAINAGE																		
			0.2				0.2			613	41200	0.2	CY					
PAVEMENT																		
16			45		5		61	5		304	20000	66	CY					
			188				188			452	16010	188	SY					
			18				18			617	10100	18	CY					
TRAFFIC CONTROL																		
			4				4			621	00100	4	EACH					
			4				4			621	54000	4	EACH					
			0.04				0.04			644	00100	0.04	MILE					
					478			478		644	00400	478	FT					
					427			427		644	01500	427	FT					
			18		3		21			626	00100	21	EACH					
STRUCTURE REPAIR (MOT-75-2033)																		
						190			190	514	00050	190	SF					
						190			190	514	00056	190	SF					
						190			190	514	00060	190	SF					
						190			190	514	00066	190	SF					
						1			1	514	00504	1	MNHR					
						1			1	514	10000	1	EACH					

GENERAL SUMMARY

MOT-VAR VAR

REF.	SHEET	STATION		AVERAGE LENGTH FEET	AVERAGE WIDTH FEET	SIDE	ITEM DESCRIPTION																																
		FROM	TO				201	202	202	202	202	202	202	202	202	203	203	209	304	452	510	606	606	613	614	614	614	614	617	621	621	622	622	622	622	626	626		
							LUMP	EACH	FOOT	SO. YD.	SO.YD.	FOOT	EACH	EACH	CU. YD.	CU. YD.	STA.	CU. YD.	SO. YD.	EACH	FOOT	EACH	CU. YD.	EACH	MILE	FOOT	FOOT	CU. YD.	EACH	EACH	FOOT	FOOT	FOOT	FOOT	FOOT	EACH	EACH		
IA-1	23	0+38.07(F)	0+18.07(F)			LT																		1															
PB-1	23	0+18.07(F)	3+78.07(F)	310		LT																																	
CHL-1	23	2+37.83 (F)	3+78.07 (F)			LT																				143													
EL-1	23	56+26 (4)	3+78.07 (F)			LT																			0.11														
DL-1	23	47+00 (4)	49+11 (4)			LT																					206.5												
R-1	29	200+33.15	200+48.15	15		LT		1																															
R-2	29	202+58.92	202+73.92	15		LT		1																															
BW-1	29	200+33.15	200+48.15	15		LT																																	
BW-2	29	200+48.15	202+58.92	211	8	LT									110	30		31.2	187.4																			15	
BW-3	29	202+58.92	202+73.92	15		LT																															211	5	
R-3	29	200+48.15	202+75.42	228	8	LT				202.67																											15		
R-4	29	200+48.15	202+58.92	242		LT						182	2																							15			
R-5	29	198+26.77	198+30.77	4	5.75	LT				3																										15			
R-6	30	43+55.00	44+05.00	50		LT								1																									
GR-1	30	39+17.50	44+05.00	488		LT																																	
R-7	31	76+10.89	77+42.89	132		RT																																	
R-8	31	77+42.89	79+72.89	230		RT																																	
BW-4	31	76+10.89	77+42.89	132		RT	LS				7.3																												
BW-5	31	77+42.89	79+72.89	230		RT																																	
TOTALS CARRIED TO GENERAL SUMMARY							LUMP	2	362	205.67	8	182	2	1	149	30	4	45	188	268	437.5	1	0.2	1	0.11	143	207	18	4	4	230		373		340	18			

CALCULATED	REB	ESTIMATED QUANTITIES
	CHECKED	
CWV		

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MATCH
LINE

TO NB 75 →

199

MATCH
LINE

P.C.C. STA.
200+00.60

R-1

EX. BARRIER/
MSE WALL #5
200+33.15
200+48.15
BW-1

BW-2

PROP. TYPE D BARRIER, AS PER PLAN
SEE DETAIL E-E ON SHT 37.

FOR BALLOON QUANTITIES SEE SHEET 28.
FOR EXCAVATION AND EMBANKMENT SEE X-SEC SHEETS 33-35.
EXISTING RAMP "C" NOT SHOWN

* PORTION OF STRUCTURE REMOVED, AS PER PLAN SEE DETAILS
SHEETS 36-40.

▨ = PAVEMENT REMOVED

PROP. SAW CUT LINE

B RAMP "E"

EX. GUARDRAIL REMOVED

R-4

EX. PAVEMENT REMOVED

R-3

EX. PRESSURE RELIEF
JOINT, TYPE A

R-5

END APPROACH SLAB
STA. 198+22.79

STA. 198+26.77 TO STA. 198+30.77±
EX. PAVEMENT REMOVED
(4' x 5'-9")

EX. JOINTS

MATCH
LINE

STRUCTURE No. MOT-70-26074

TO NB 75 →

198

PROP. SAW CUT LINE

199

LSM = (4' x 5.75' x .25')/3/3/3
OR .21 CU. YD.

P.C. STA.
198+77.61

MATCH
LINE

EL-1

R-2

PROP. SAW CUT LINE

202+58.92

*
202+73.92

EX. BARRIER/
MSE WALL #6

BW-3

203

CALCULATED
REB
CHECKED
TMK

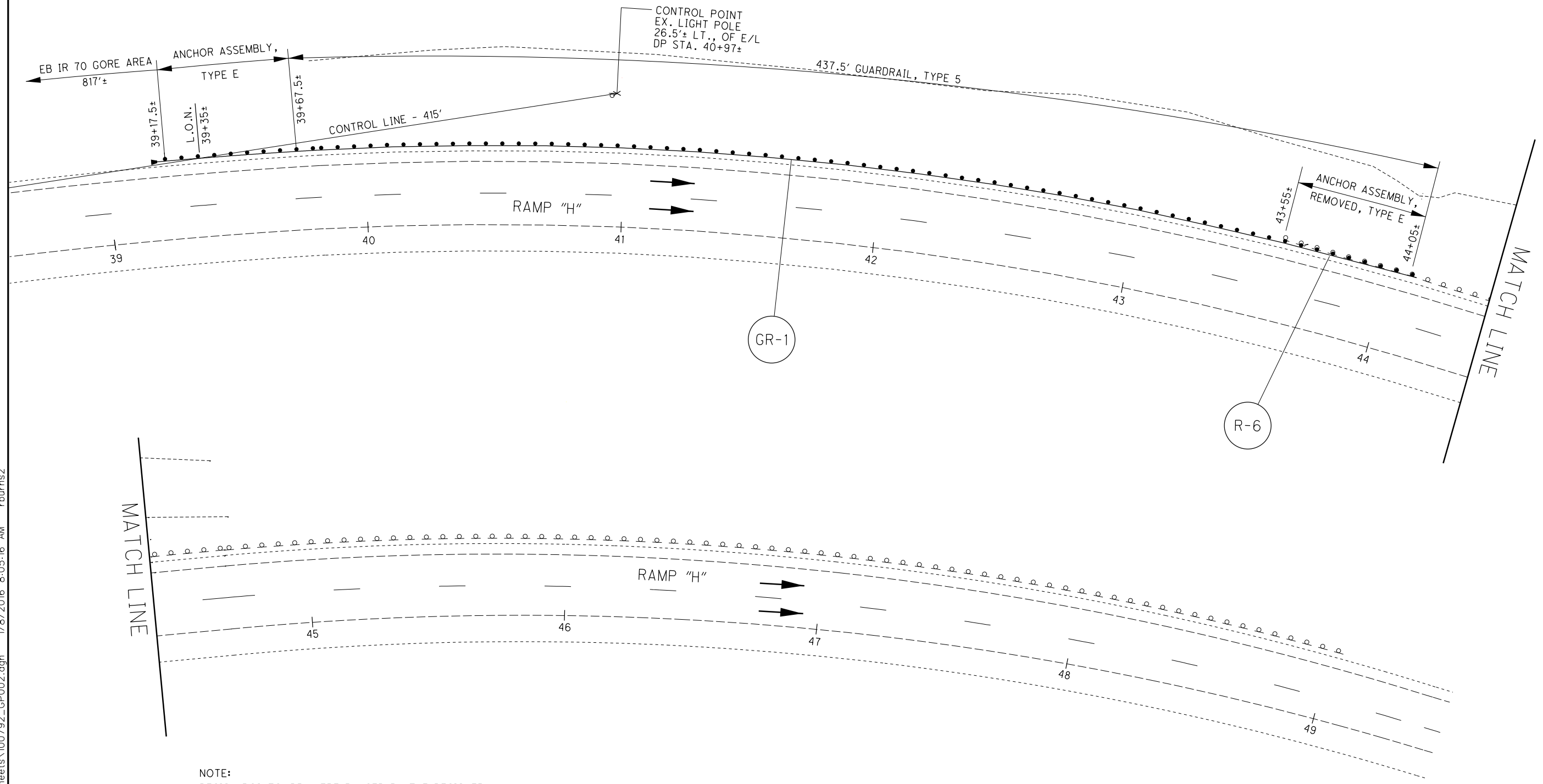
0 15 30
7.5
HORIZONTAL
SCALE IN FEET

PLAN SHEET
RAMP "E" STA. 198+00 TO STA. 202+75.42

MOT-VAR VAR

EASTBOUND 70 TO SOUTHBOUND 75 (RAMP "H")

CALCULATED	REB	CHECKED	TMK
------------	-----	---------	-----



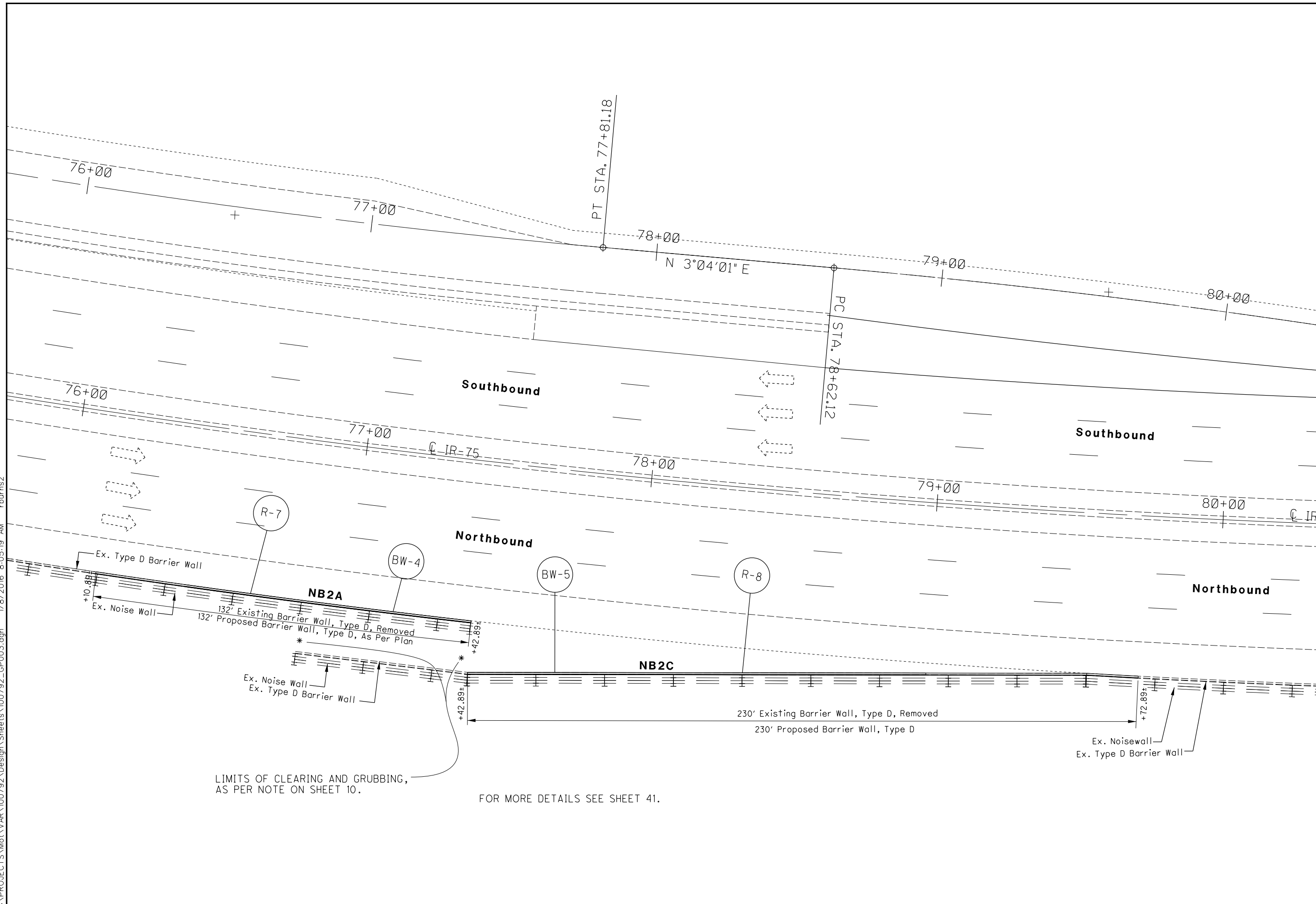
NOTE:
 DESIGN POINTS (DP) WERE PLACED BY THE DESIGNER
 TO AID IN THE DESIGN PROCESS, THEY DO NOT
 REPRESENT ANY TYPE OF SURVEY POINT. THEREFORE
 ALL OFFSETS AND MEASUREMENTS SHALL BE CONSIDERED
 PLUS/MINUS.

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PLAN SHEET
 RAMP "H" STA. 39+00 TO STA. 49+00

MOT-VAR VAR

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LIMITS OF CLEARING AND GRUBBING,
AS PER NOTE ON SHEET 10.

FOR MORE DETAILS SEE SHEET 41.

CALCULATED
REB
CHECKED
TMK

0 15 30
7.5'
HORIZONTAL
SCALE IN FEET

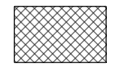
N

PLAN SHEET
MOT-75-16.20 (JUST SOUTH OF KEENAN RD.)

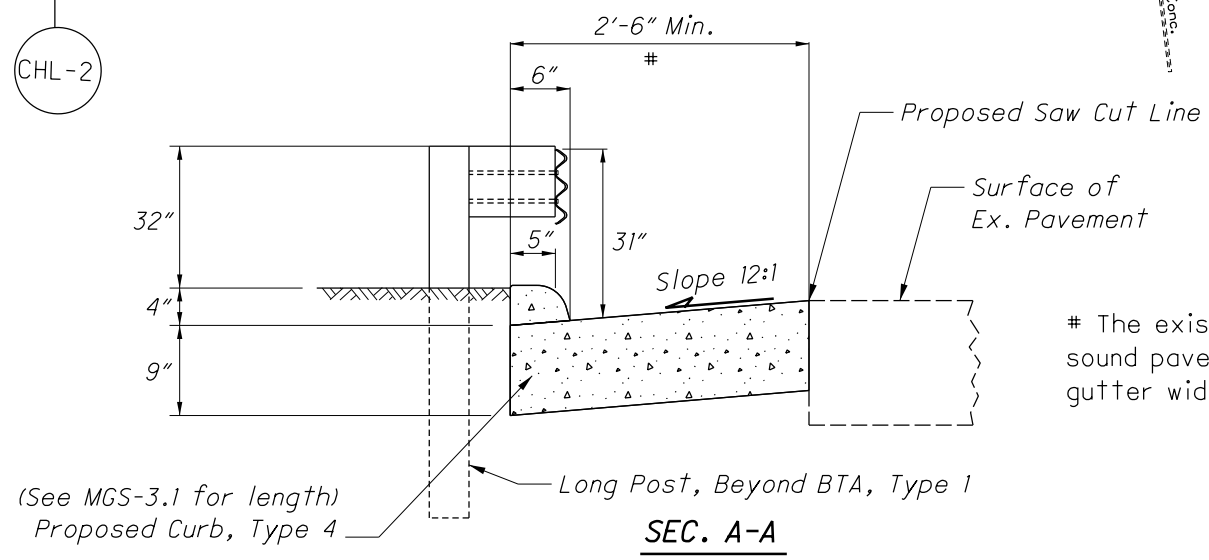
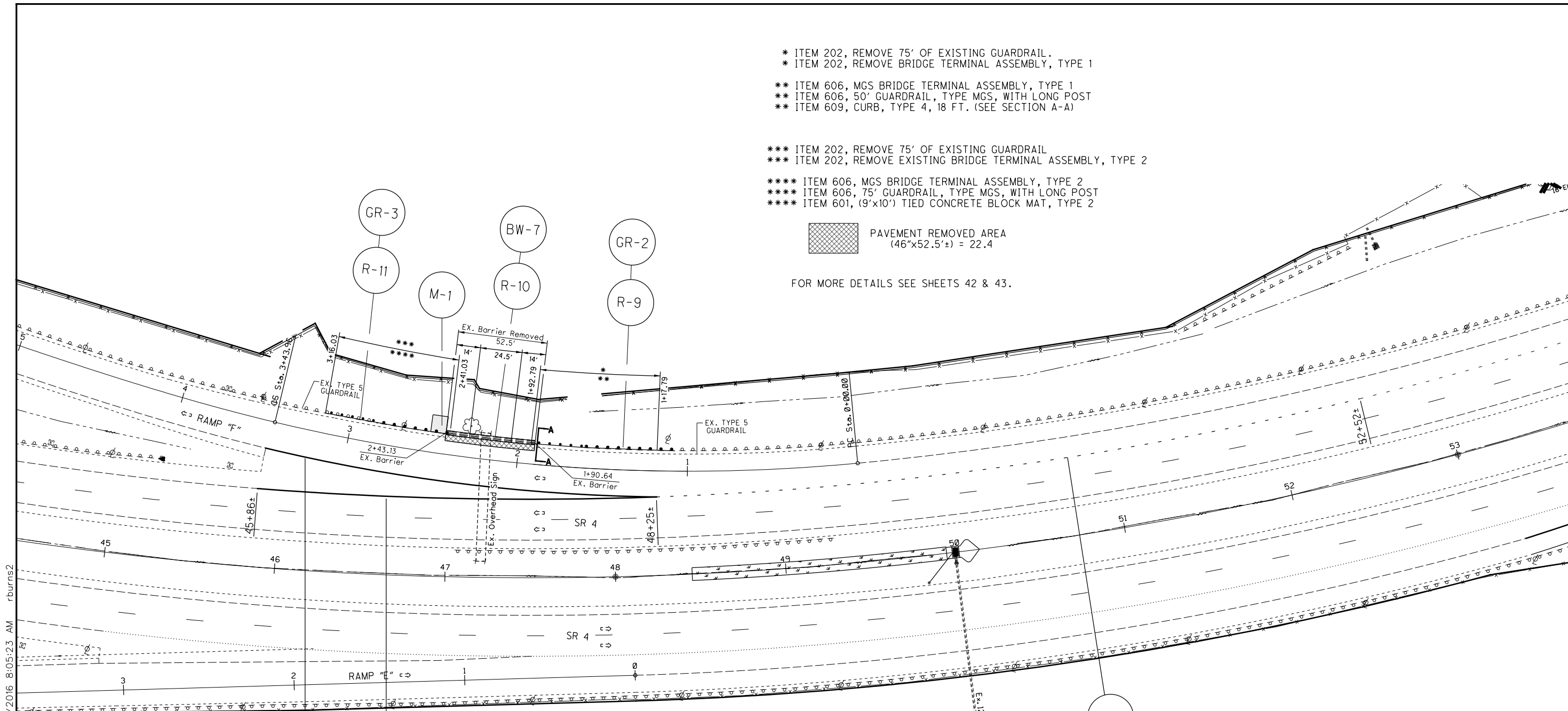
MOT-VAR VAR

- * ITEM 202, REMOVE 75' OF EXISTING GUARDRAIL.
- * ITEM 202, REMOVE BRIDGE TERMINAL ASSEMBLY, TYPE 1
- ** ITEM 606, MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1
- ** ITEM 606, 50' GUARDRAIL, TYPE MGS, WITH LONG POST
- ** ITEM 609, CURB, TYPE 4, 18 FT. (SEE SECTION A-A)

- *** ITEM 202, REMOVE 75' OF EXISTING GUARDRAIL
- *** ITEM 202, REMOVE EXISTING BRIDGE TERMINAL ASSEMBLY, TYPE 2
- **** ITEM 606, MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2
- **** ITEM 606, 75' GUARDRAIL, TYPE MGS, WITH LONG POST
- **** ITEM 601, (9'x10') TIED CONCRETE BLOCK MAT, TYPE 2


 PAVEMENT REMOVED AREA
 (46'x52.5'±) = 22.4

FOR MORE DETAILS SEE SHEETS 42 & 43.

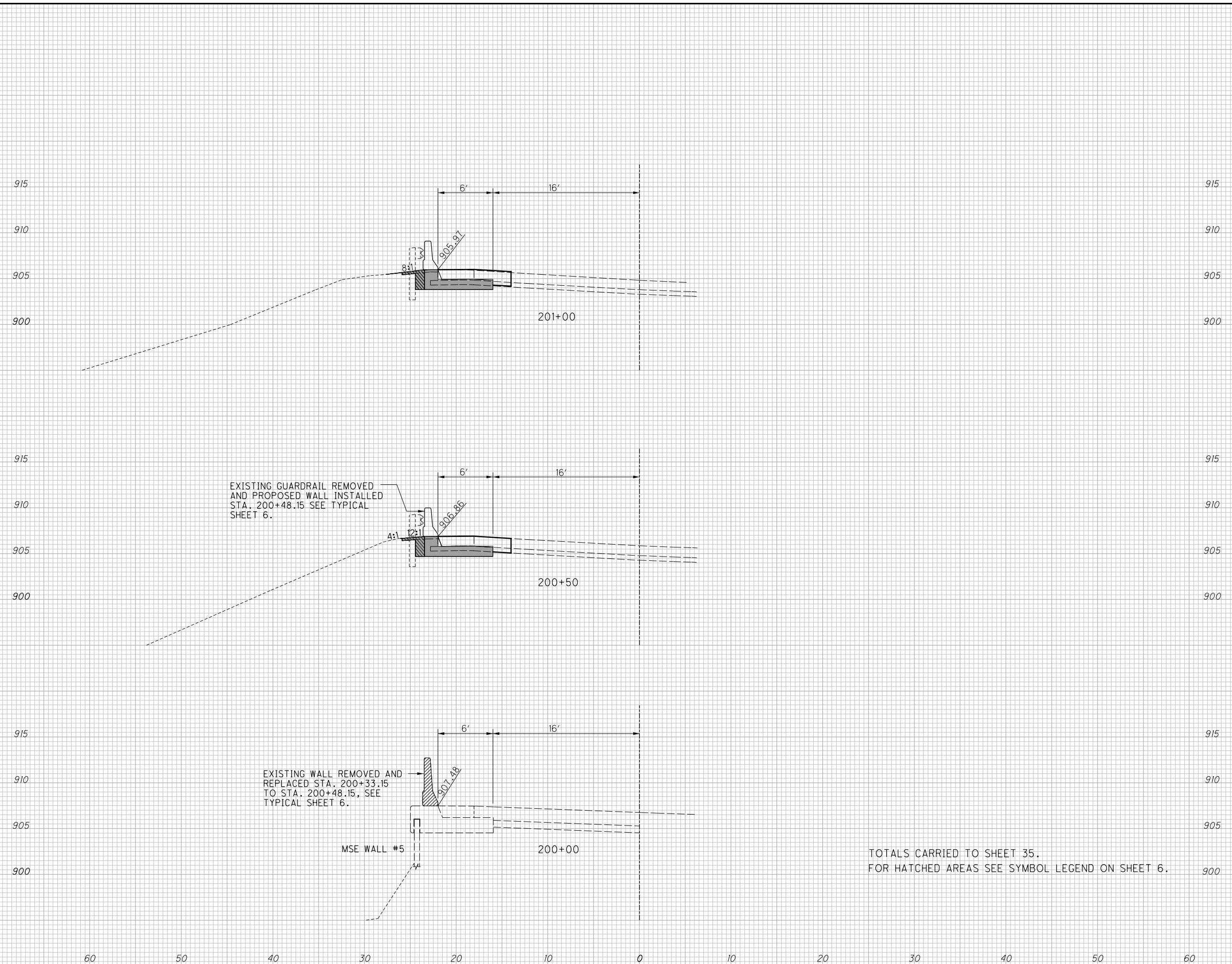


The existing pavement edge shall be saw cut to locate a sound pavement edge, per CM&S Section 202.05. Adjust the gutter width as required to meet the proposed joint.

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SEEDING	
END WIDTH	SO. YDS.
42	0
0	0
14	5
28	5



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0	0	0
12	3	22	6
12	3	11	3
33	9		

TOTALS CARRIED TO SHEET 35.
FOR HATCHED AREAS SEE SYMBOL LEGEND ON SHEET 6.

CROSS SECTIONS
STA. 200+00 TO STA. 201+00

MOT-VAR

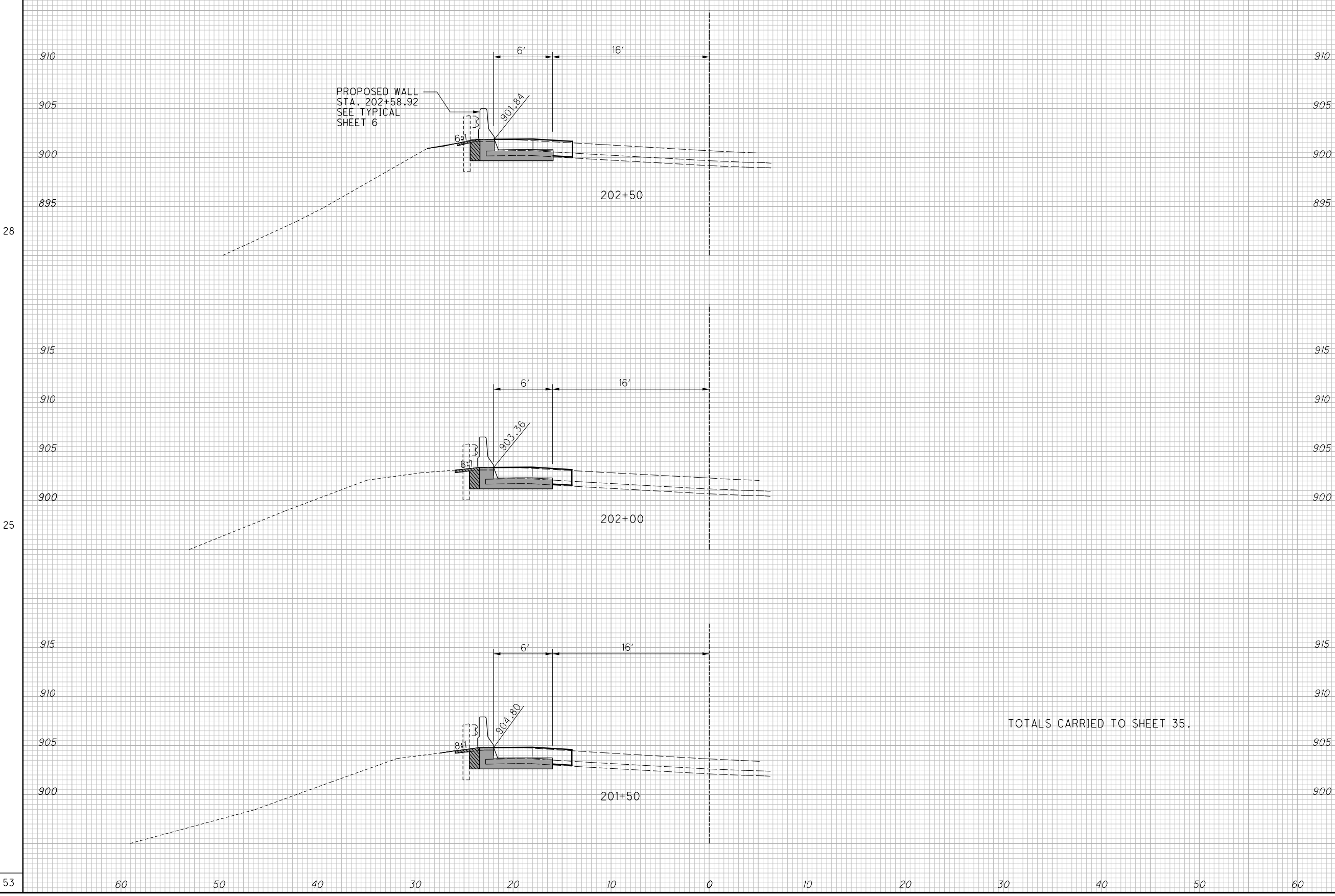
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SEEDING	
END WIDTH	SO. YDS.
6	
28	
4	
25	
5	
53	

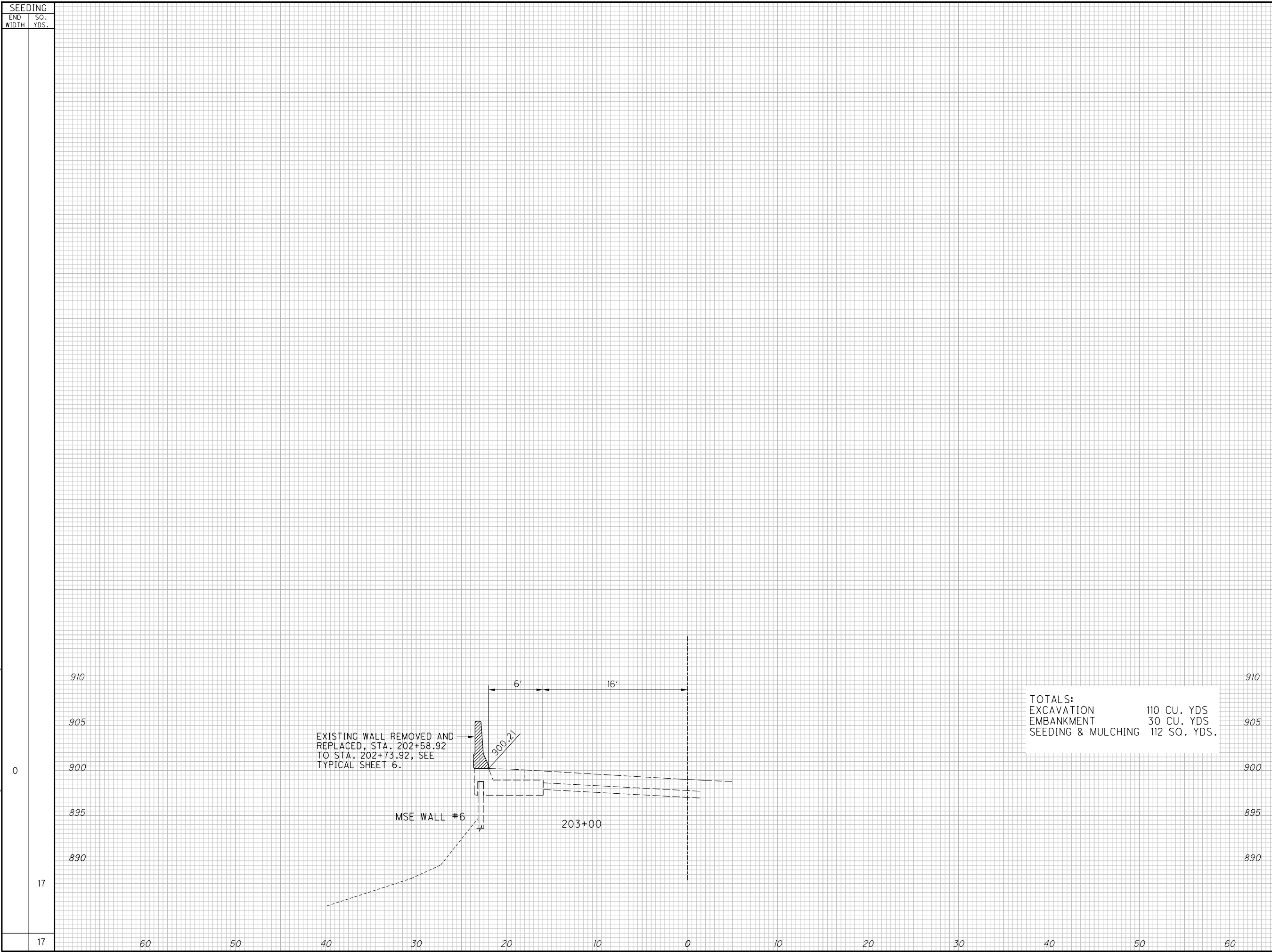
END AREA		VOLUME		CALCULATED	REB	CHECKED
CUT	FILL	CUT	FILL			
12	3	22	6			
12	3	22	6			
12	3	22	6			
		66	18			

**CROSS SECTIONS
STA. 201+50 TO STA. 202+50**

MOT-VAR



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EXISTING WALL REMOVED AND REPLACED, STA. 202+58.92 TO STA. 202+73.92, SEE TYPICAL SHEET 6.

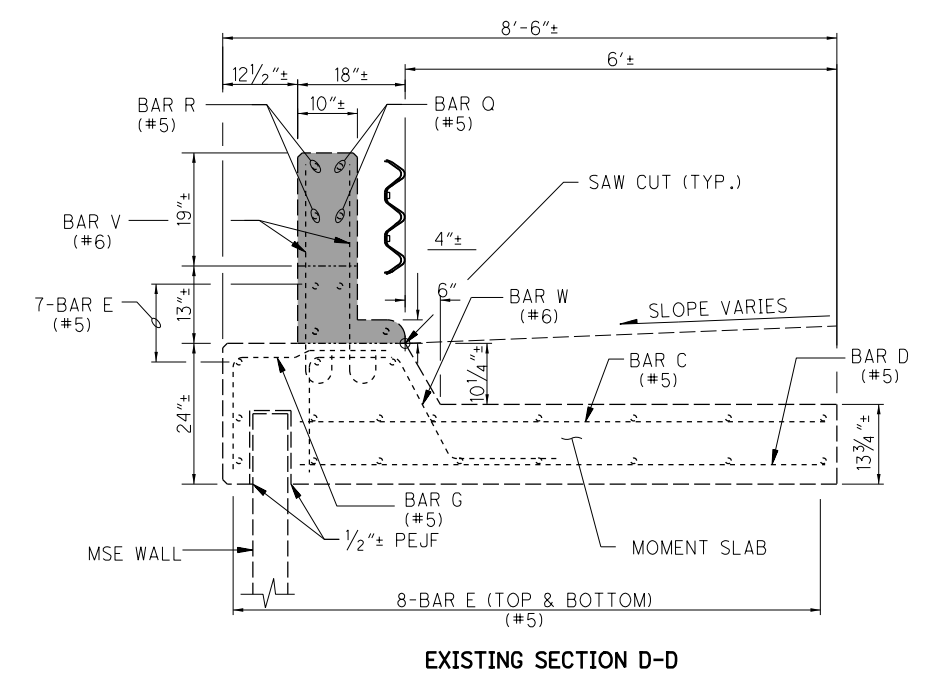
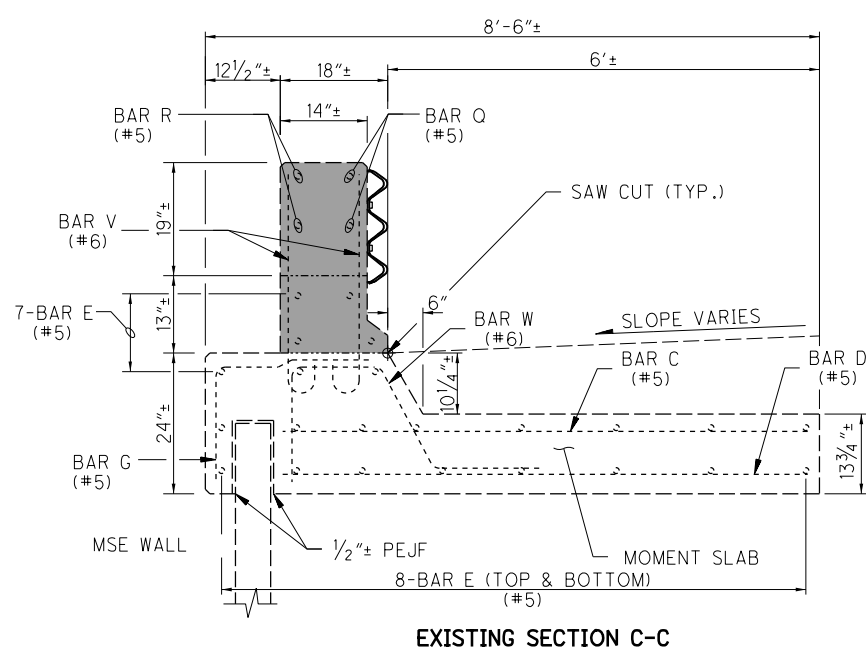
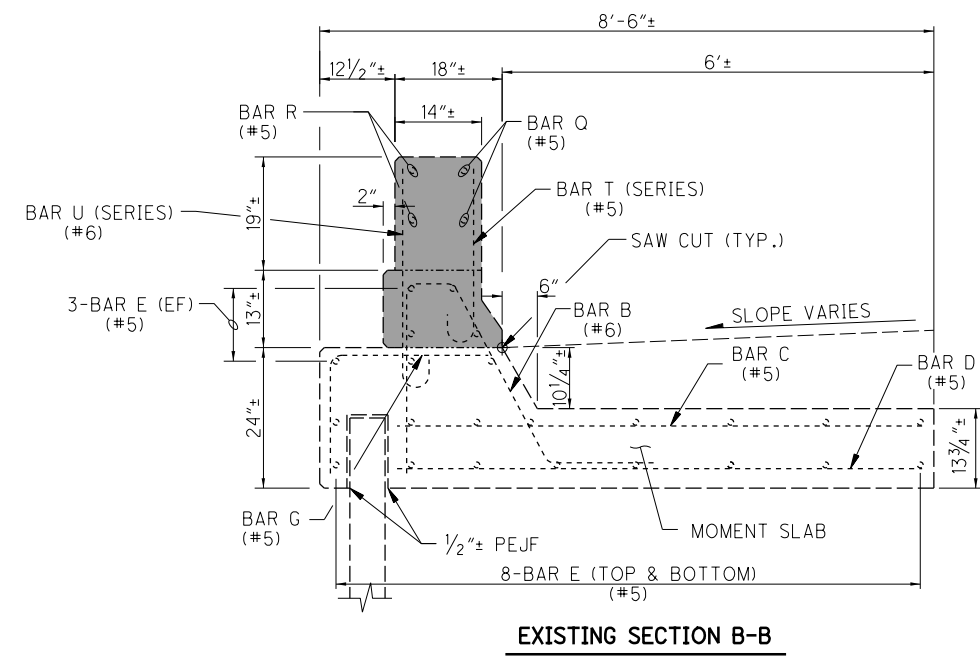
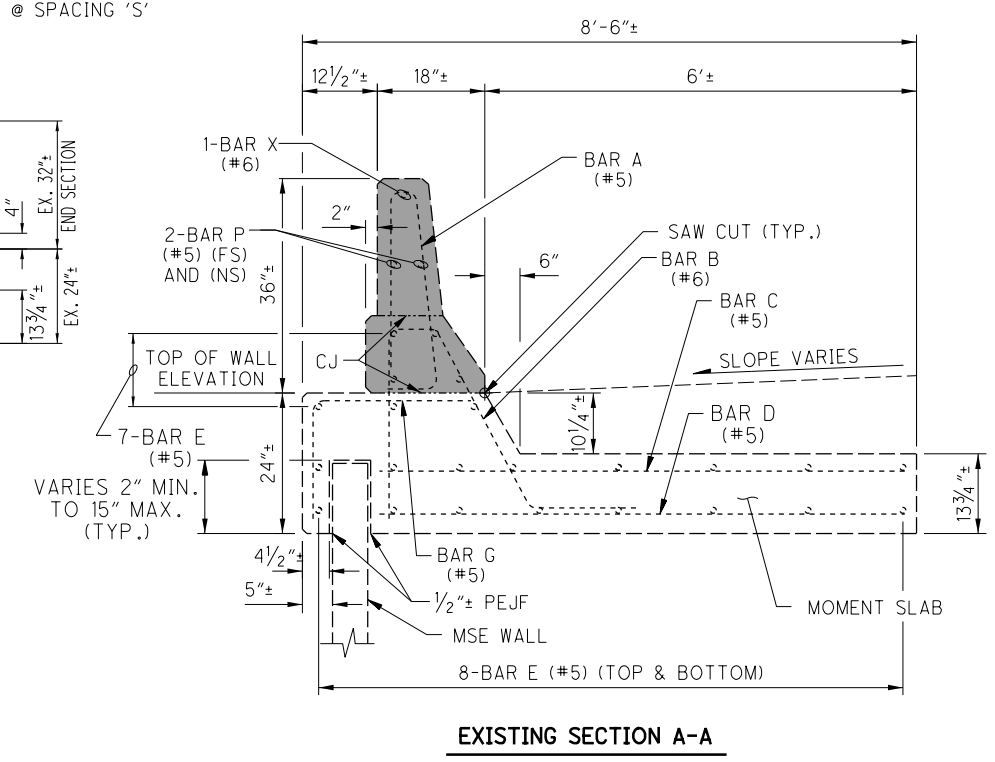
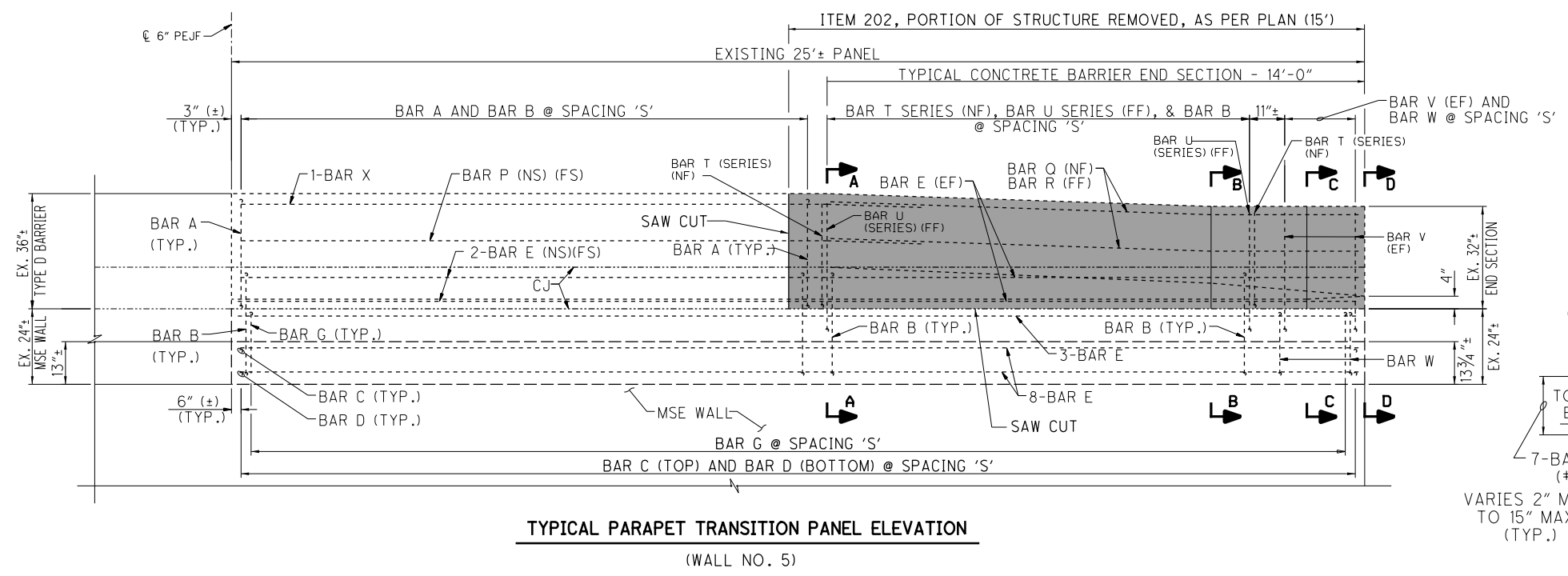
MSE WALL #6
203+00

TOTALS:
EXCAVATION 110 CU. YDS
EMBANKMENT 30 CU. YDS
SEEDING & MULCHING 112 SQ. YDS.

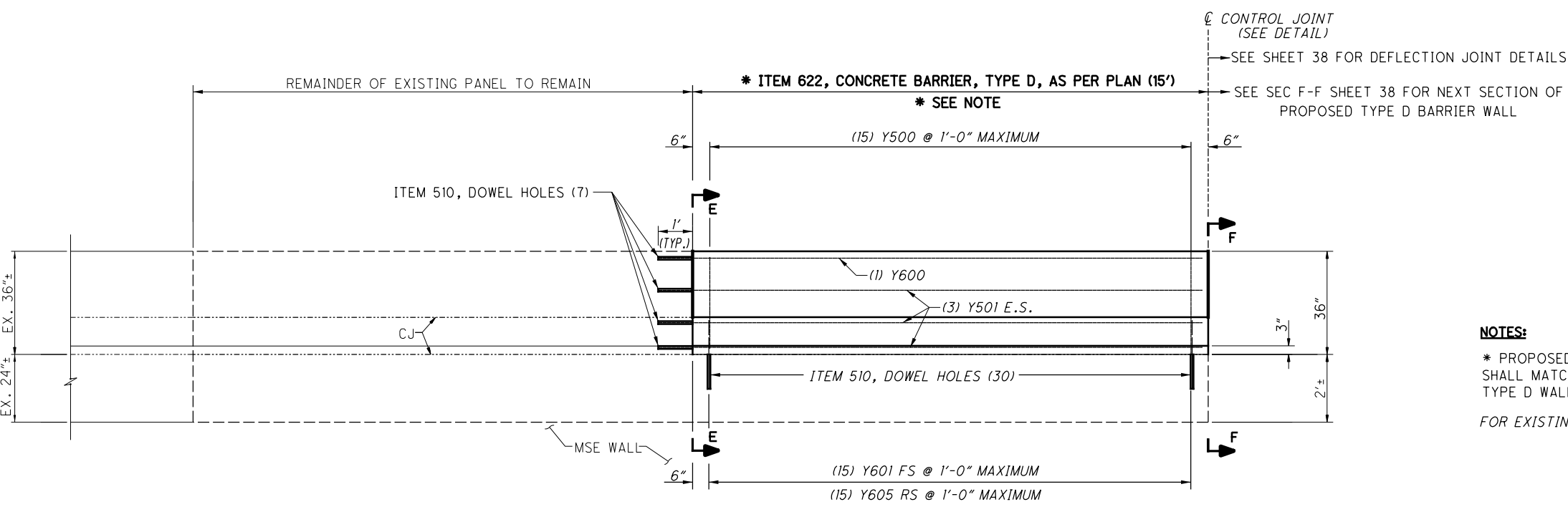
SEEDING		END AREA		VOLUME		CALCULATED	REB	CHECKED
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL			
17		0	0	11	3			
17				11	3			

CROSS SECTIONS
STA. 203+00

MOT-VAR VAR

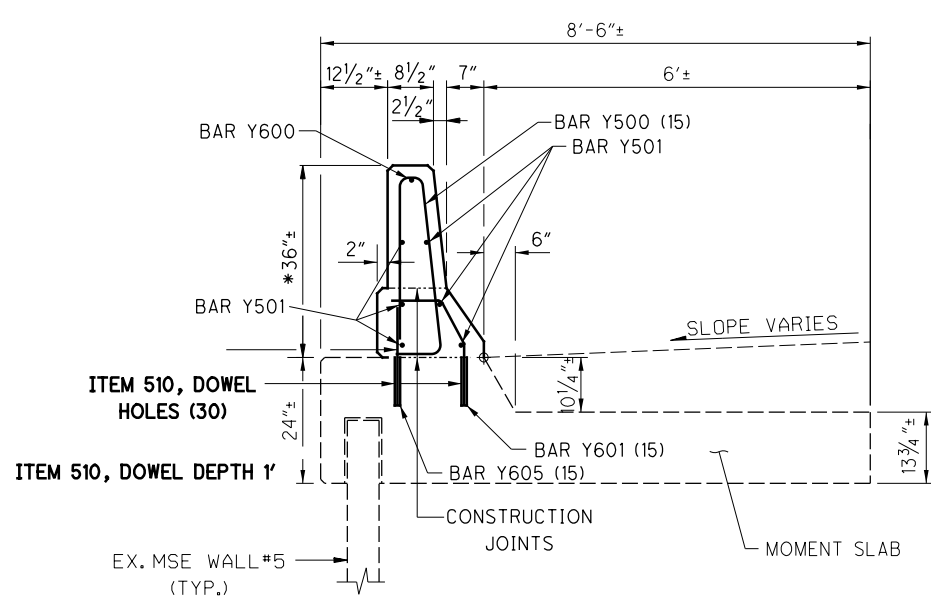


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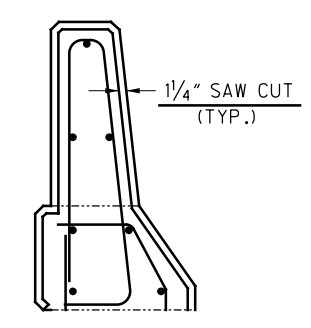


PROPOSED BARRIER WALL - DETAIL E-E ELEVATION
(WALL NO. 5)

NOTES:
 * PROPOSED TYPE D DEFLECTOR BARRIER SHALL MATCH THE HEIGHT/SHAPE OF THE EXISTING TYPE D WALL BEYOND THE TRANSITION END.
 FOR EXISTING BAR SIZES SEE SHEET 36.



PROPOSED BARRIER WALL - SEC. E-E

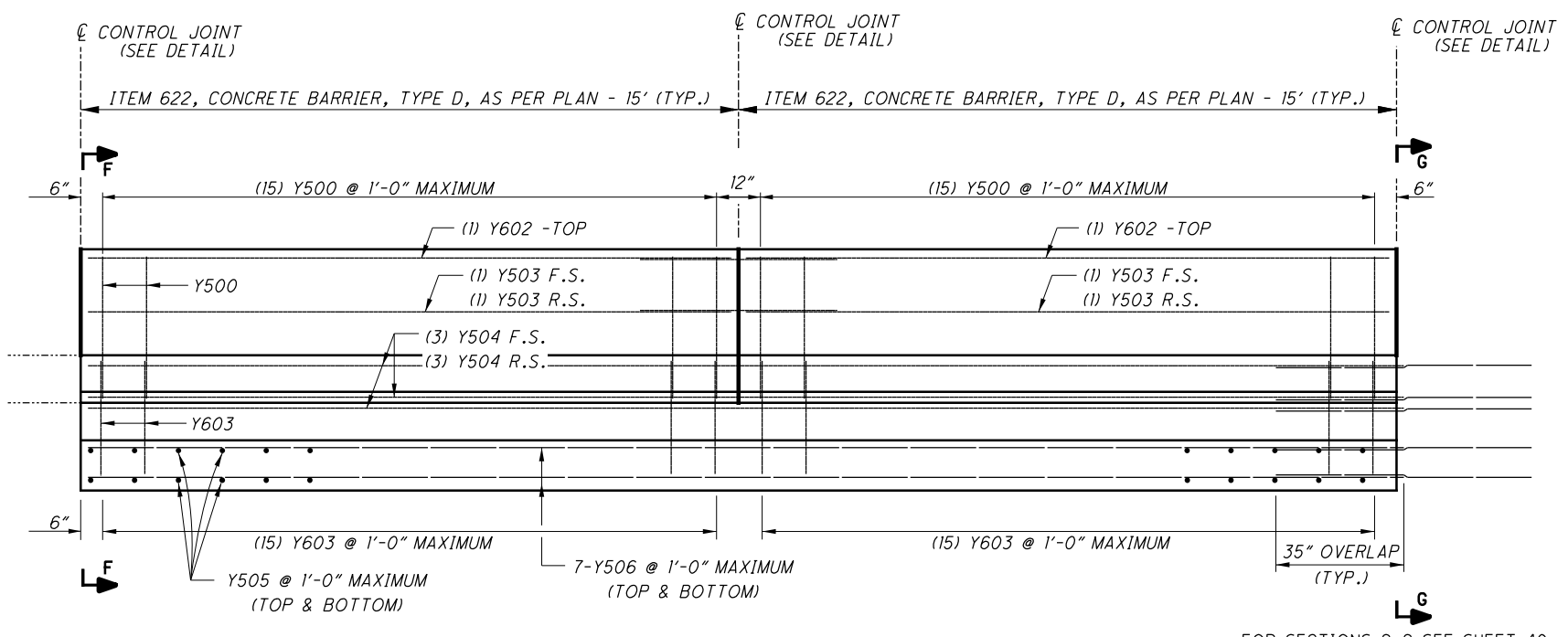


CONTROL JOINT DETAIL

I:\PROJECTS\Mot\VAR\100792\Design\Sheets\100792_GM002.dgn 1/8/2016 8:05:33 AM rburns2

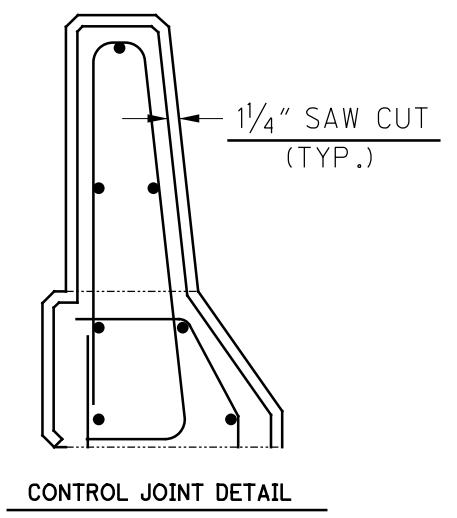
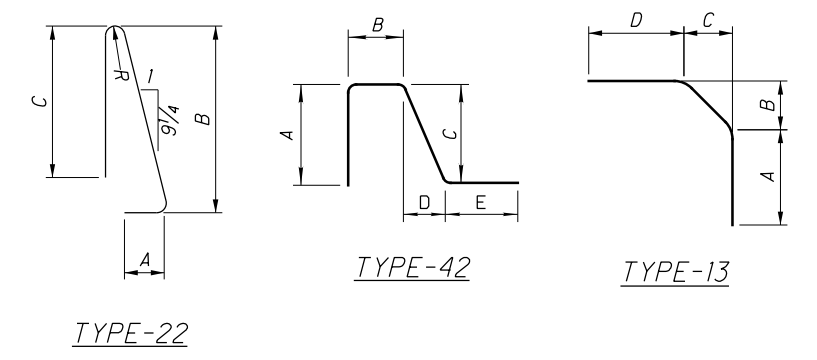
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
WALL #5											
Y500	15	5'-11"	92	22	0'-8"	2'-9"	2'-6"			0'-2"	
Y501	6	15'-10"	99	STR							
Y600	1	15'-10"	24	STR							
Y601	15	6'-5"	145	13	2'-8 1/4"	0'-8 1/4"	2'-6"	1'-3"	1'-6"		
Y605	15	2'-0"	45	STR							
		SUB-TOTAL	405								
PROPOSED WALL											
Y500	210	5'-11"	1296	22	0'-8"	2'-9"	2'-6"			0'-2"	
Y503	30	14'-8"	459	STR							
Y504	42	30'-0"	1314	STR							
Y505	422	7'-7"	3338	STR							
Y506	98	30'-0"	3066	STR							
Y602	15	14'-8"	330	STR							
Y603	210	7'-7"	2397	42	2'-8 1/4"	0'-8 1/4"	2'-6"	1'-3"	1'-6"		
		SUB-TOTAL	12200								
WALL #6											
Y500	15	5'-11"	92	22	0'-8"	2'-9"	2'-6"			0'-2"	
Y501	6	15'-10"	99	STR							
Y600	1	15'-10"	24	STR							
Y601	15	6'-5"	145	13	2'-8 1/4"	0'-8 1/4"	2'-6"	1'-3"	1'-6"		
Y605	15	2'-0"	45	STR							
		SUB-TOTAL	405								
		TOTAL	13010								

TOTAL CARRIED TO GENERAL SUMMARY

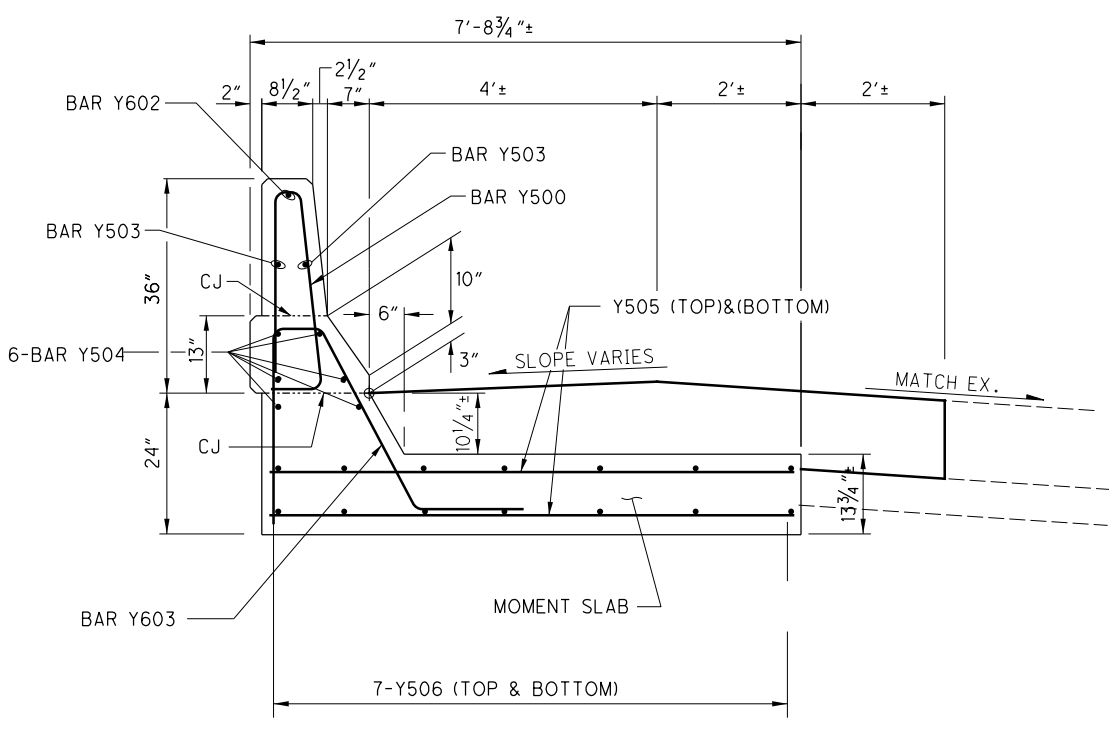


FOR SECTIONS G-G SEE SHEET 40.

PROPOSED BARRIER WALL ON MOMENT SLAB - DETAIL F-F ELEVATION
(BETWEEN WALL NO. 5 AND WALL NO. 6)

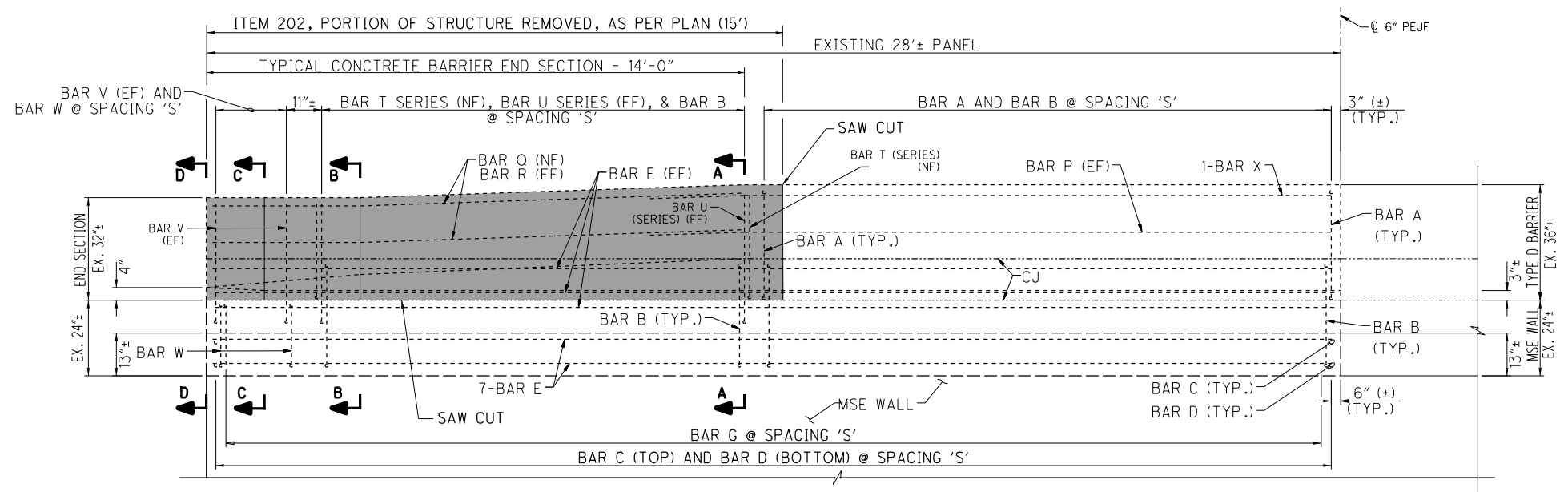


CONTROL JOINT DETAIL



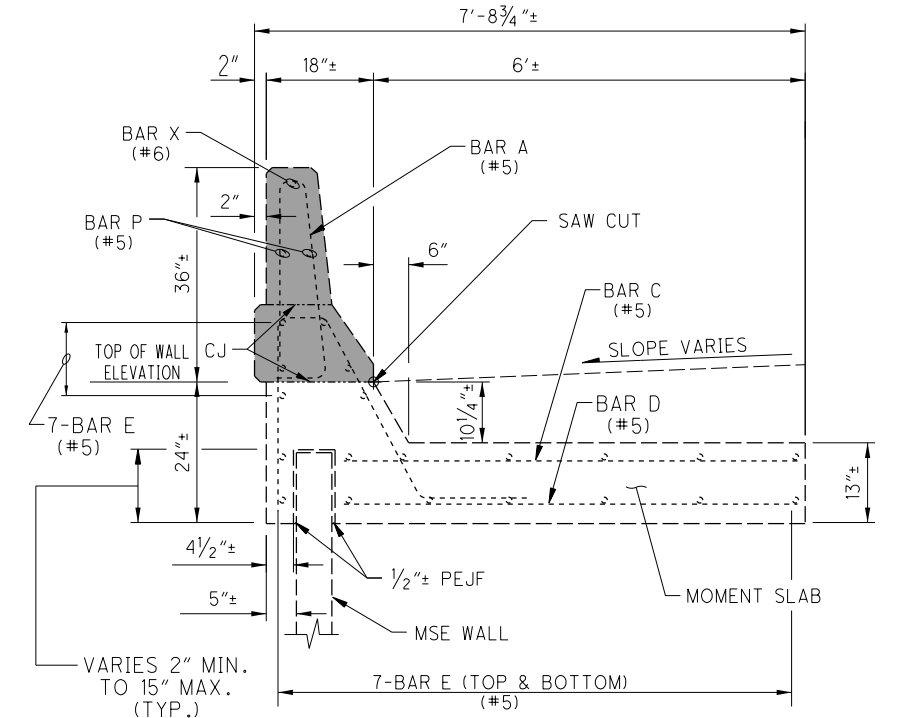
PROPOSED SECTION F-F

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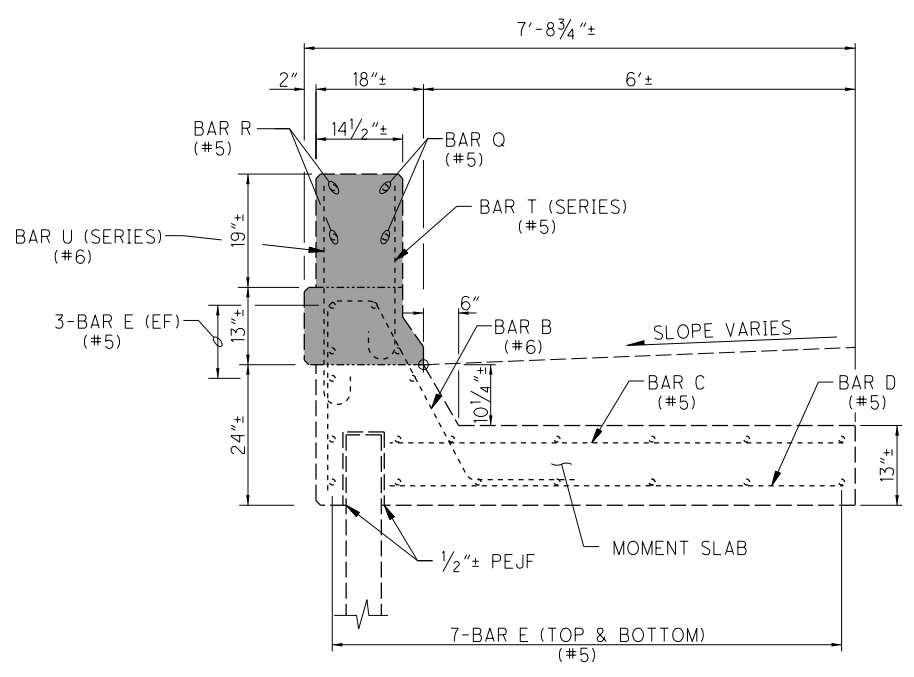


TYPICAL PARAPET TRANSITION PANEL ELEVATION
(WALL NO. 6)

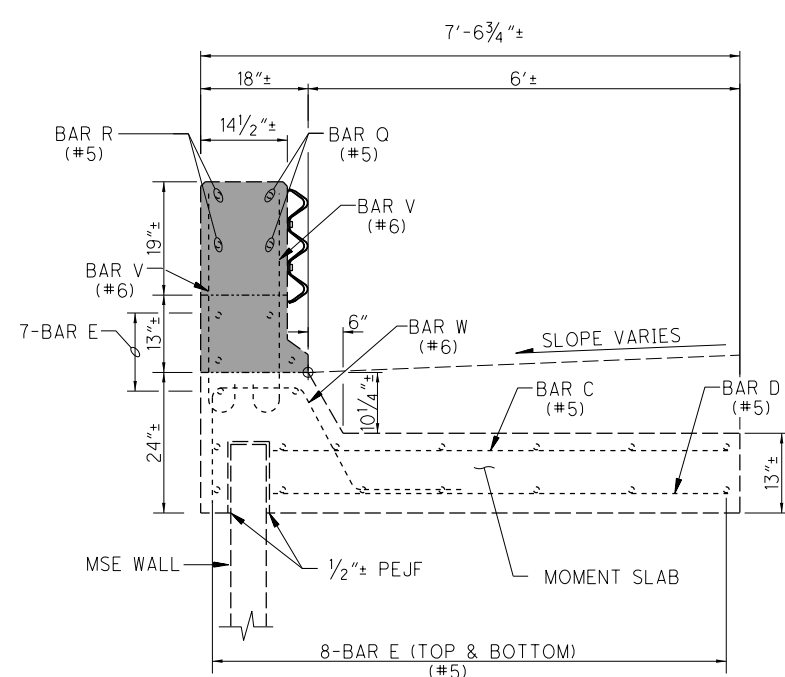
= PROPOSED 15' SECTION REMOVED



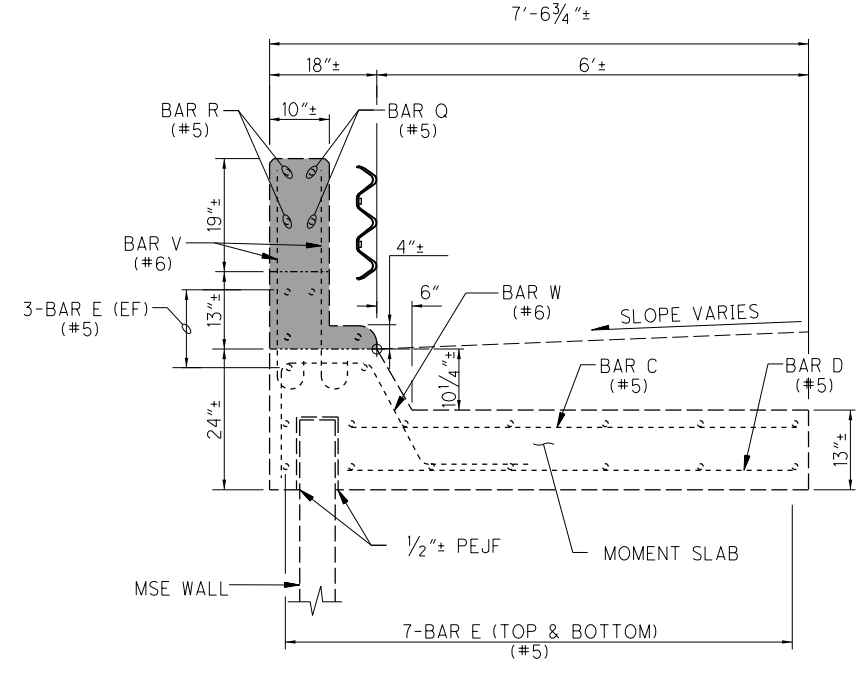
EXISTING SECTION A-A



EXISTING SECTION B-B



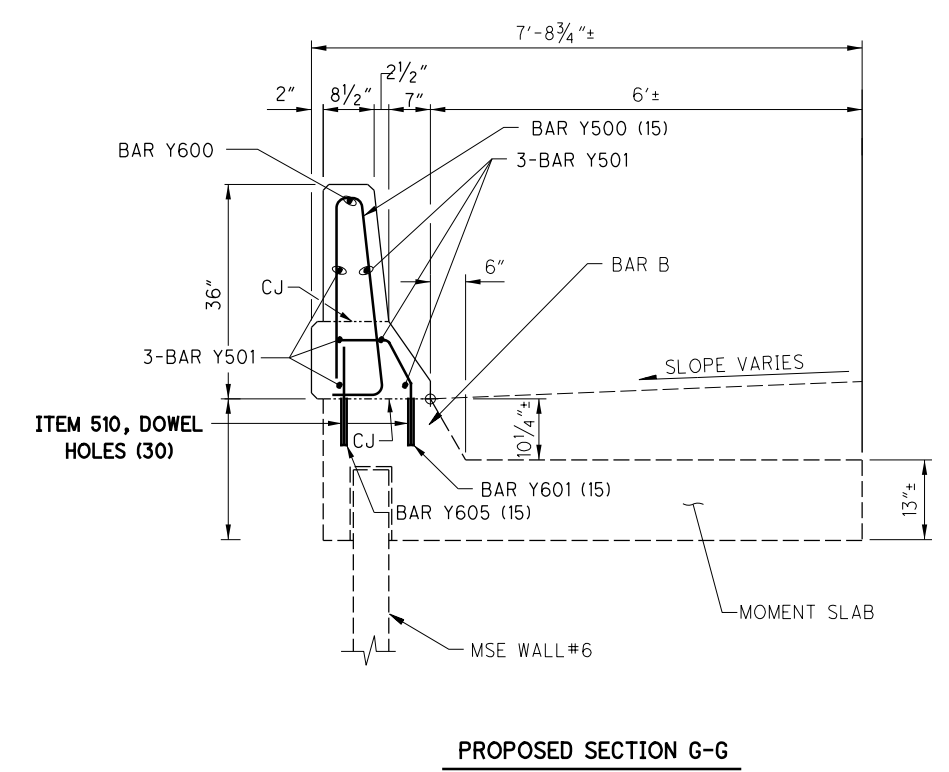
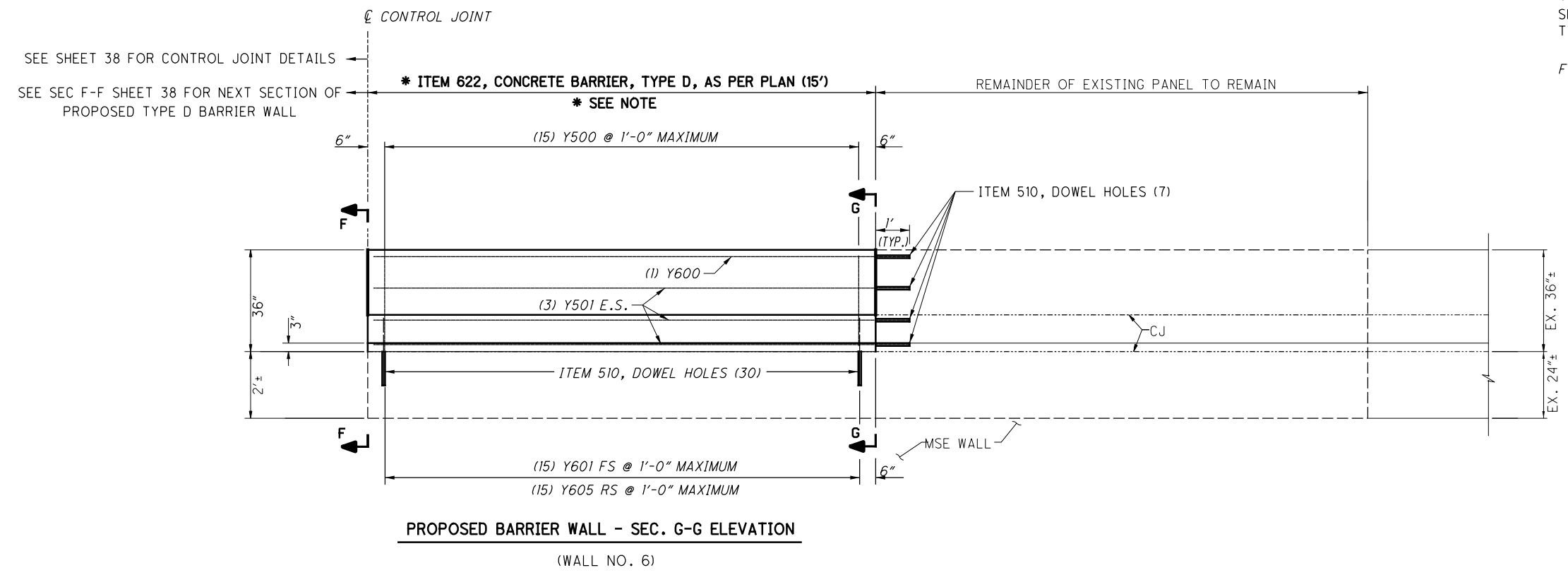
EXISTING SECTION C-C



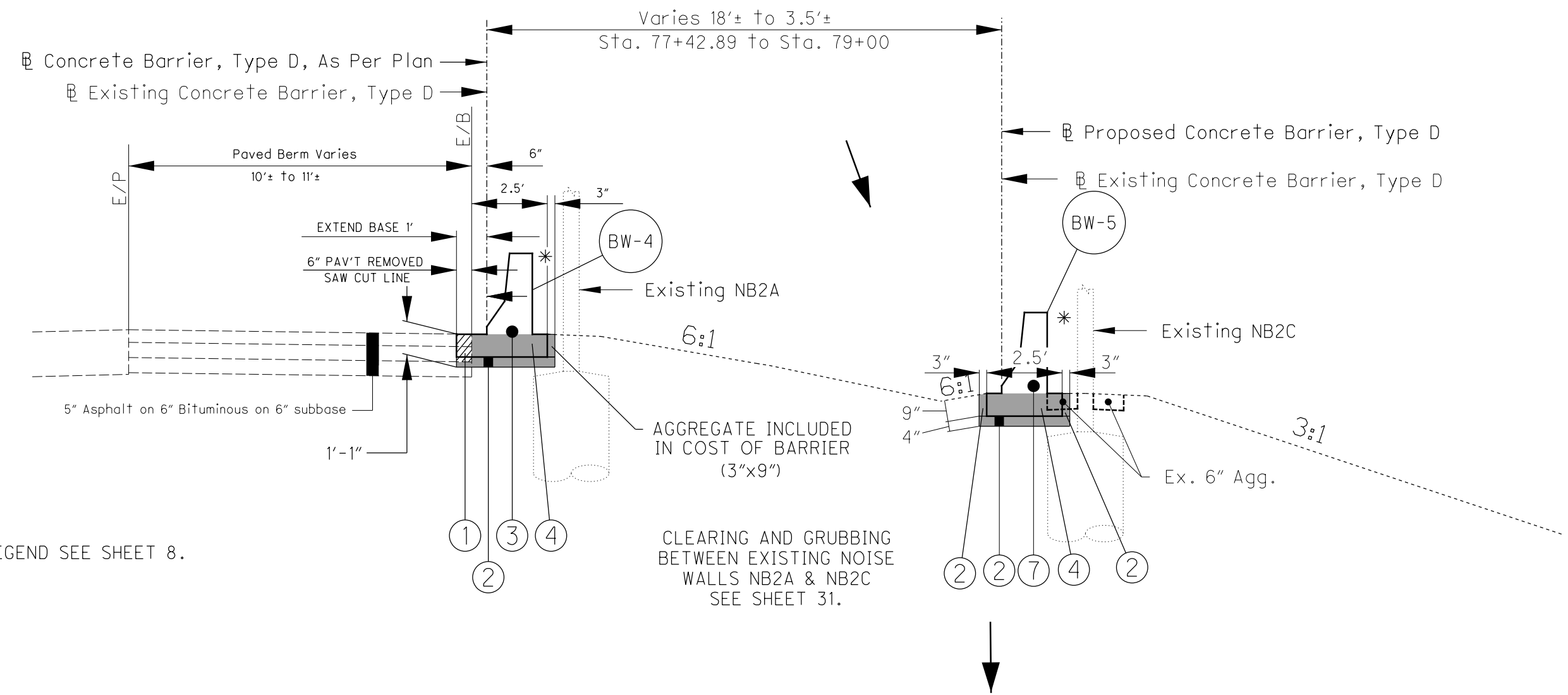
EXISTING SECTION D-D

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NOTES:
 * PROPOSED TYPE D DEFLECTOR BARRIER SHALL MATCH THE HEIGHT/SHAPE OF THE EXISTING TYPE D WALL BEYOND THE TRANSITION END.
 FOR EXISTING BAR SIZES SEE SHEET 39.



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FOR LEGEND SEE SHEET 8.

PROPOSED WORK:

- 1). REMOVE EXISTING CONCRETE BARRIER IN FRONT OF NB2A, STA. 76+10.89 TO STA. 77+42.89
- 2). INSTALL PROPOSED CONCRETE BARRIER, TYPE D, AS PER PLAN IN FRONT OF NB2A, STA. 76+10.89 TO STA. 77+42.89
- 3). REMOVE EXISTING CONCRETE BARRIER IN FRONT OF NB2C, STA. 77+42.89 TO STA. 79+72.89
- 4). INSTALL PROPOSED CONCRETE BARRIER, TYPE D IN FRONT OF NB2C, STA. 77+42.89 TO STA. 79+72.89
- 5). CLEARING AND GRUBBING BETWEEN NOISE WALLS.

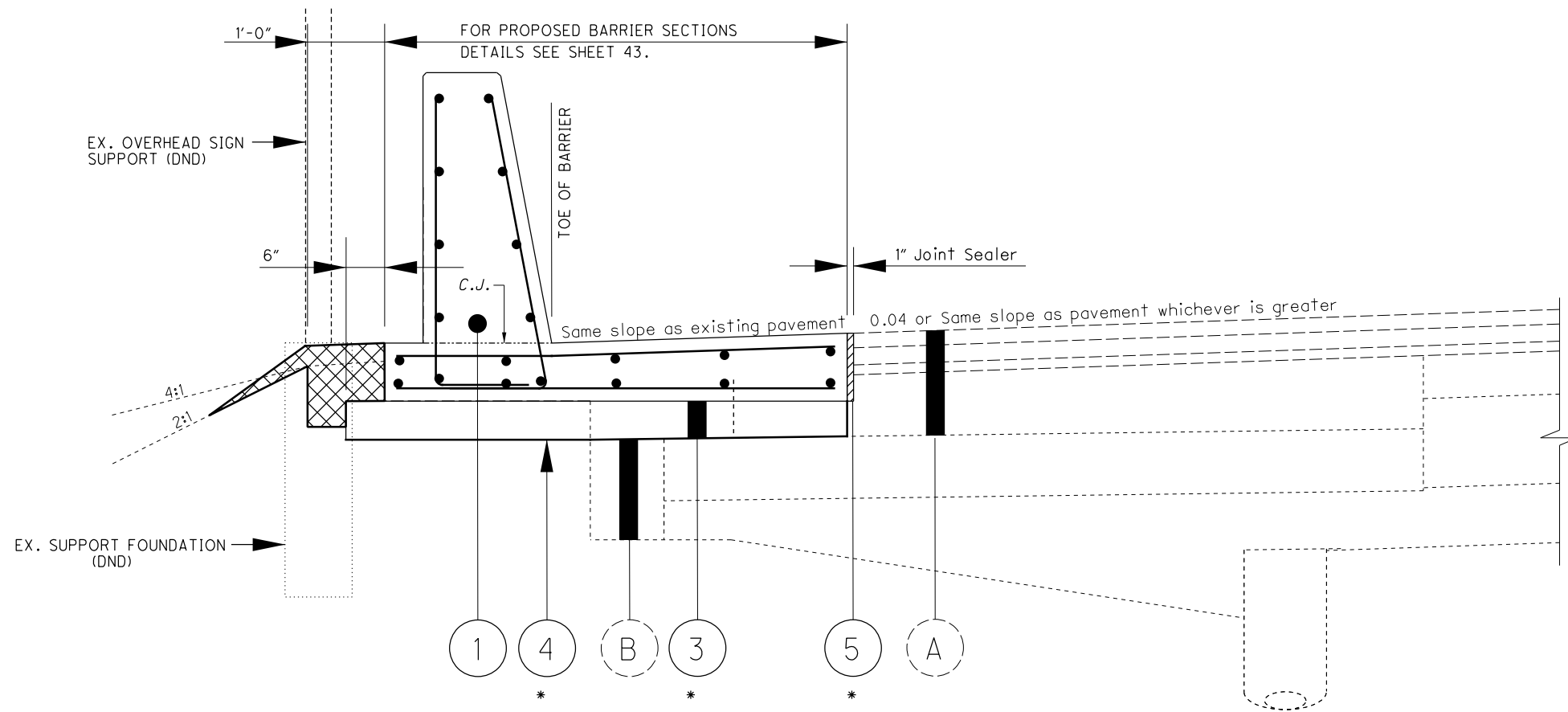
- ITEM 202 - PAVEMENT REMOVE, ASPHALT
- ITEM 203 - EXCAVATION

* LOCATION AND OFFSETS DISTANCE SHOULD MATCH WHAT IS IN THE FIELD.

ALL STATIONS, MEASUREMENTS, AND OFFSETS ARE FROM EXISTING METRIC PLAN MOT-75-19.602, AND THEREFORE SHALL BE CONSIDERED ±.

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FOR LEGEND SEE SHEET 9.
FOR MORE DETAILS AND QUANTITIES SEE SHEET 43.
*TYPICAL FOR BARRIER WALL AND END SECTIONS

CALCULATED
REB
CHECKED
CWW

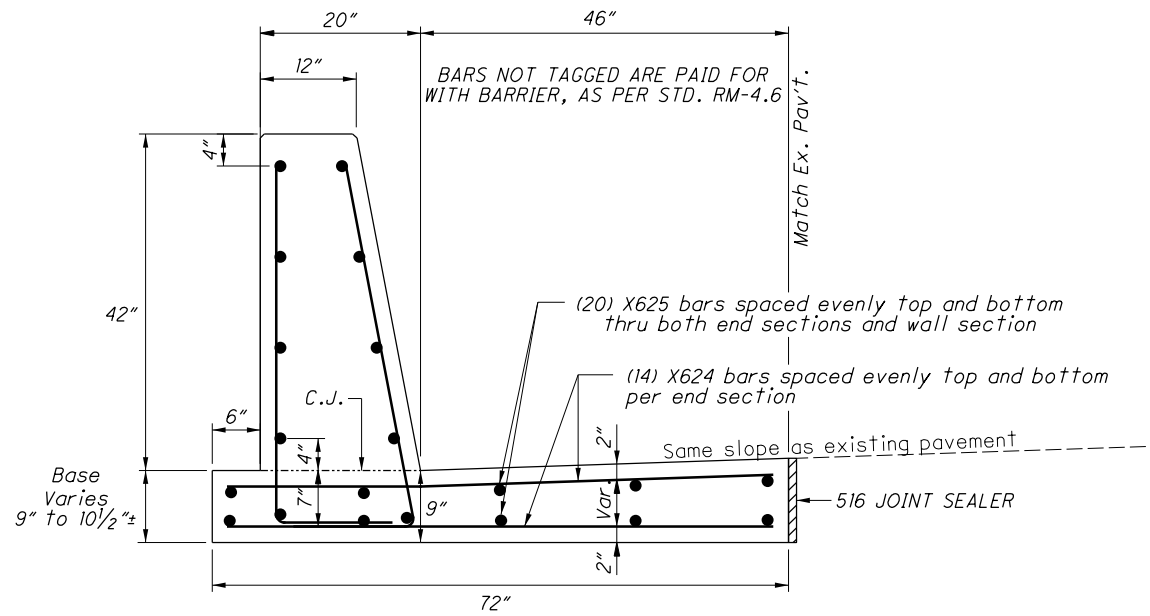
BARRIER DETAIL - (MOT-4-18.40)

MOT-VAR VAR

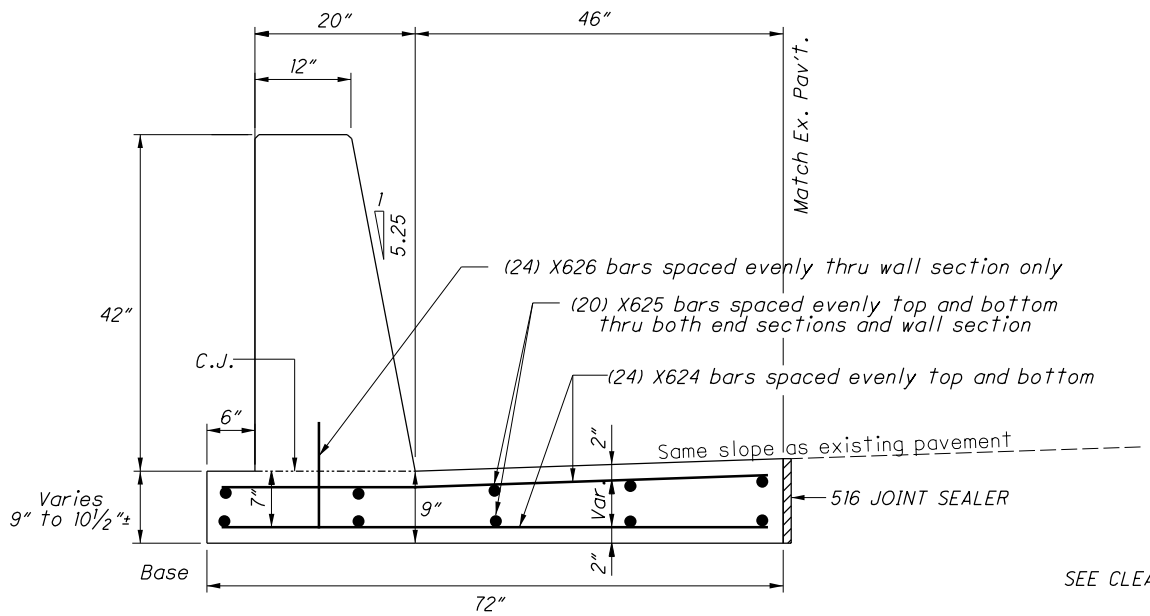
42

51

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CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN
APPLIES TO SECTION M-M THRU P-P OF STANDARD DWG. RM-4.6



CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN
APPLIES TO SECTION A-A OF STANDARD DWG. RM-4.5

SEE CLEARING AND GRUBBING NOTE ON SHEET 10.

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS					
	TOTAL				A	B	C	D	E	R
MOT-4-18.40										
X624	52	5'-8"	442	STR						
X625	20	38'-8"	1162	STR						
X626	24	1'-1"	39	STR						
SUB-TOTAL			943							

REF. SHEET NO.	SIDE STATION	FROM	TO	SQ. YD.	FOOT	CONCRETE BARRIER REMOVED	GUARDRAIL REMOVED	BRIDGE TERMINAL ASSEMBLY REMOVED	EXCAVATION	EMBANKMENT	SUBGRADE COMPACTION	LINEAR GRADING	AGGREGATE BASE	EPOXY COATED REINFORCING	JOINT SEALER	TIED CONCRETE BLOCK MAT, TYPE 2	GUARDRAIL, TYPE MGS WITH LONG POST	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	CURB, TYPE 4	CONCRETE BARRIER, TYPE D, AS PER PLAN SINGLE SLOPE	CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN	BARRIER REFLECTORS, TYPE B	CHANNELIZING LINE, 8"	DOTTED LINE, 4"	CALCULATED	REB	CHECKED																										
																													427	427																								
R9		32	1+10.54	1+92.79	RT.																																																	
R10		32	1+90.64	2+43.13	RT.	22.4	52.5																																															
R11		32	2+41.03	3+16.03	RT.			1	2.7	1.8																																												
GR2		32	1+10.54	1+92.79	RT.																																																	
BR-7		32	1+90.64	2+43.13	RT.																																																	
GR3		32	2+41.03	3+16.03	RT.																																																	
					RT.																																																	
CHL-1		32	45+86	48+25	LT																																																	
CHL-2		32	45+86	48+25	LT																																																	
DL-1		32	48+25	52+52	LT																																																	
TOTALS CARRIED TO GENERAL SUMMARY																											22	53	125	2	3	2	38	5	943	60	10	125	1	1	18	24.5	2	3	478	427	427							

BARRIER DETAIL - (MOT-4-18.40)

MOT-VAR VAR

NOTES

JOINTS: Unsealed contraction joints spaced at 20' max. shall be constructed throughout the run of Concrete Barrier except that expansion joints shall be used at the center line of and around each bridge pier column and on either side of overhead sign supports, inlets and light pole foundations. If inlet top is slip formed, the expansion joints adjacent to it may be omitted.

Contraction Joints may be constructed with metal inserts inside the forms, preformed full width joint filler, a grooving tool, or by sawing. Inserts, tooled or sawed joints shall have a 3" minimum depth. All joints shall be constructed for the full height of the barrier including the base. Sawing shall be done as soon as curing will allow, to prevent spalling.

BASE JOINTS: The vertical walls between the barrier base and a concrete pavement or concrete base shall be provided with a sealed, grooved joint as shown on Std. Const. Dwg. BP-2.J. Sealing material shall conform with CMS 705.04.

P.C.J. = Permissible Construction Joint

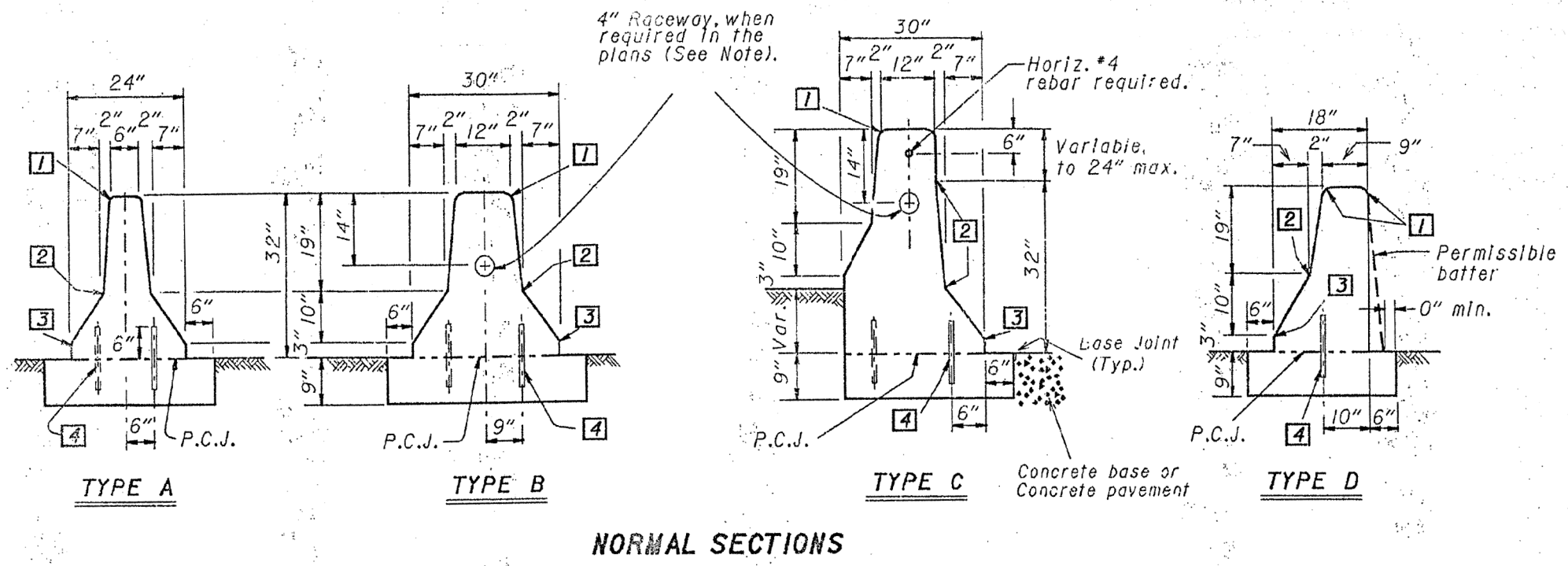
MEASUREMENT: 622 Concrete Barrier, including transitions and pier sections as per Standard Const. Drawing MC-9.4, is paid for in linear feet as one of the four types (A, B, C or D) or as Type A50 and B50, (for 50" high barrier), with appropriate deductions for other items such as:

604 I-3 Median Inlet	20 Lin. Ft.
625 Light pole foundation or pullbox	2.5 Lin. Ft.
630 Overhead sign support foundation	10 Lin. Ft.
630 Barrier wall assembly	10 Lin. Ft.

50 INCH HIGH BARRIER shall be built in locations specified in the plans. Construct the lower 32" of the barrier and the barrier base using the same dimensions as shown in the corresponding Normal Section. The upper 18" may be constructed integral with the bottom, or separately with No. 4 rebar dowels at 4' foot maximum spacing. Start and end dowels 6" from barrier contraction joints.

RACEWAY: The contractor shall insure that the electrical raceway is clear of internal obstructions. Cost of the 4 inch polyvinyl chloride raceway and No. 10 AWG copper-clad or aluminum-clad wire if needed for future installation of circuits shall be included in the unit cost per linear foot for item 622, Concrete Barrier.

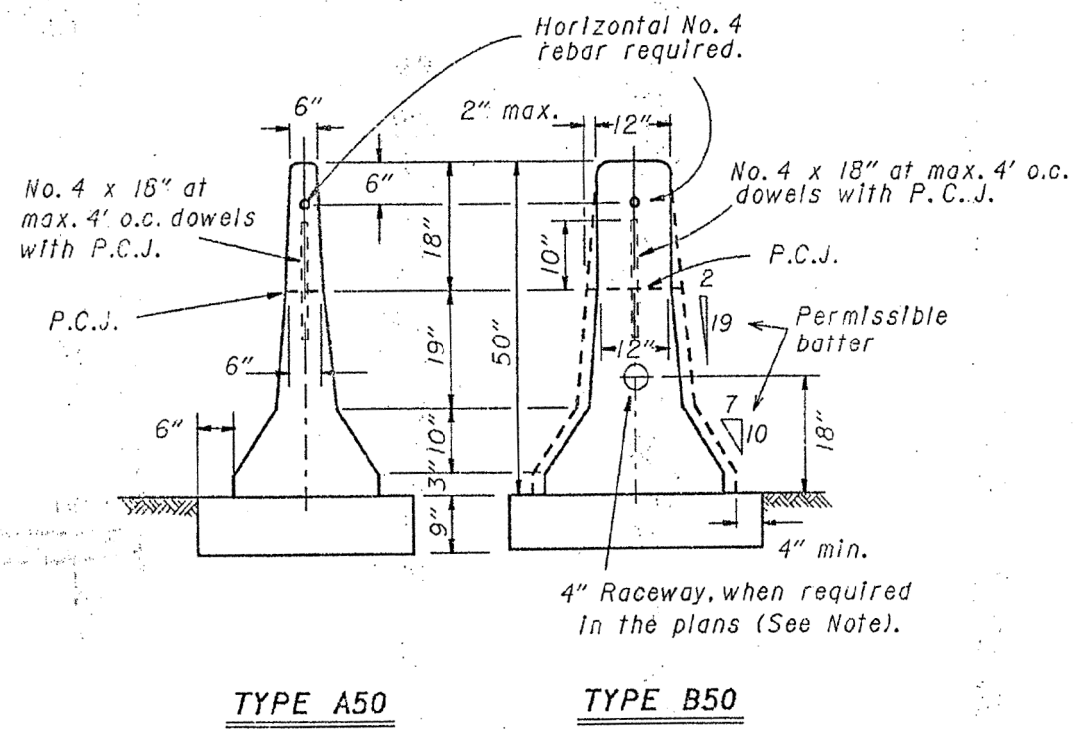
STATION MARKING shall be impressed in the "green" concrete on both sides at the top of the barrier if specified in the plans, which cost shall be incidental to the unit cost per linear foot bid for item 622, Concrete Barrier.



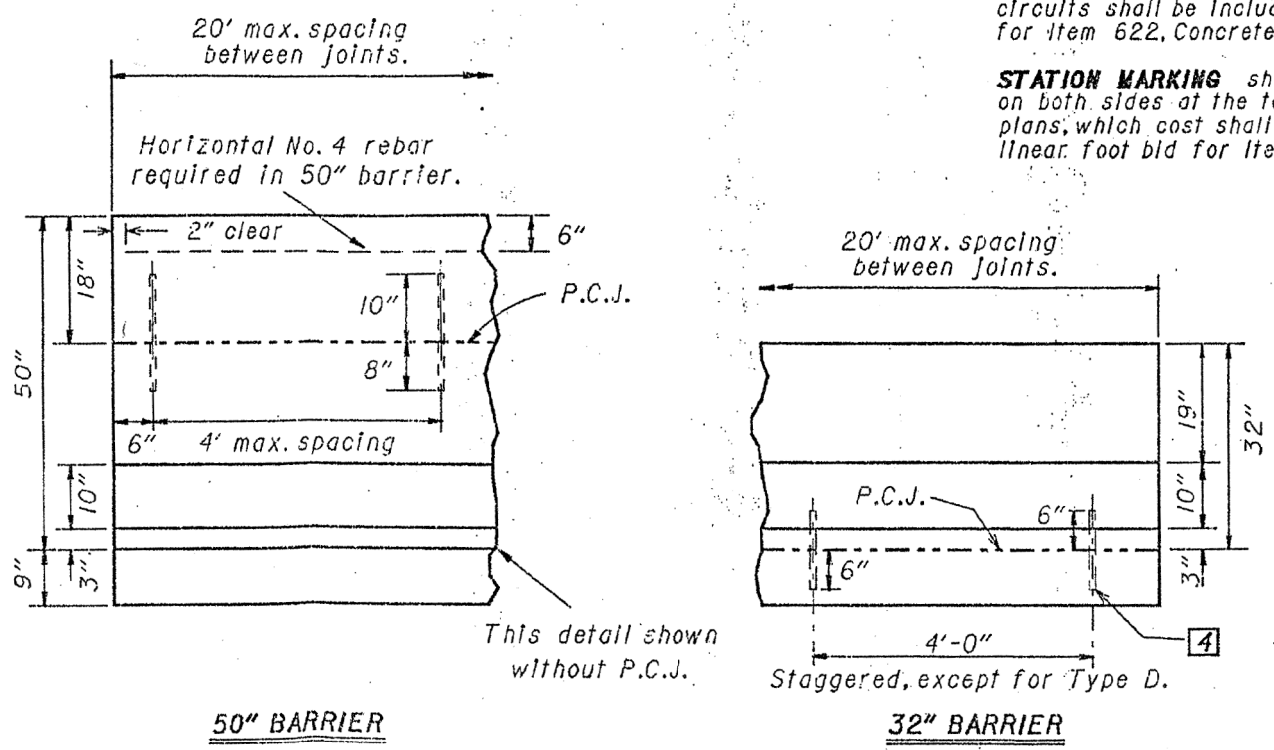
NORMAL SECTIONS

LEGEND

- 1 1" Radius or 3/4" chamfer.
- 2 Permissible 10" radius.
- 3 Permissible 1" radius.
- 4 No. 8 epoxy coated deformed steel bars, 12" long, spaced 4' between successive bars on a staggered (except Type D) pattern. Omit dowels when top is constructed integral with the base.



50" BARRIERS - TYPICAL SECTIONS



BARRIER ELEVATIONS

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF TRANSPORTATION

CONCRETE BARRIER

STANDARD CONSTRUCTION DRAWING **MC-9.3**

DATE 10-30-92

APPROVED *K.K. Hulimann* ENGR. I & D

PLAN INSERT SHEET - CONCRETE BARRIER

MOT-VAR VAR

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NOTES

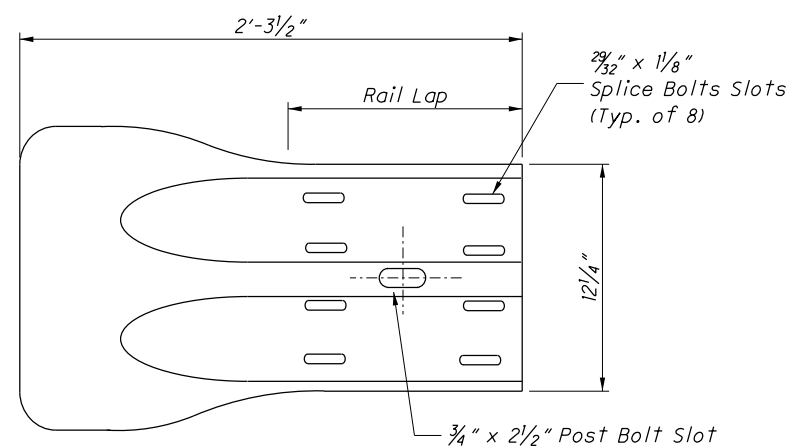
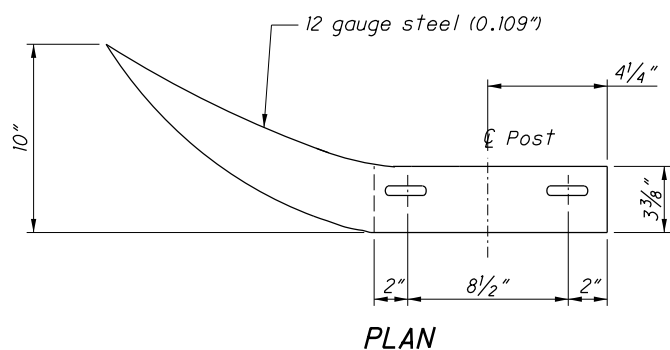
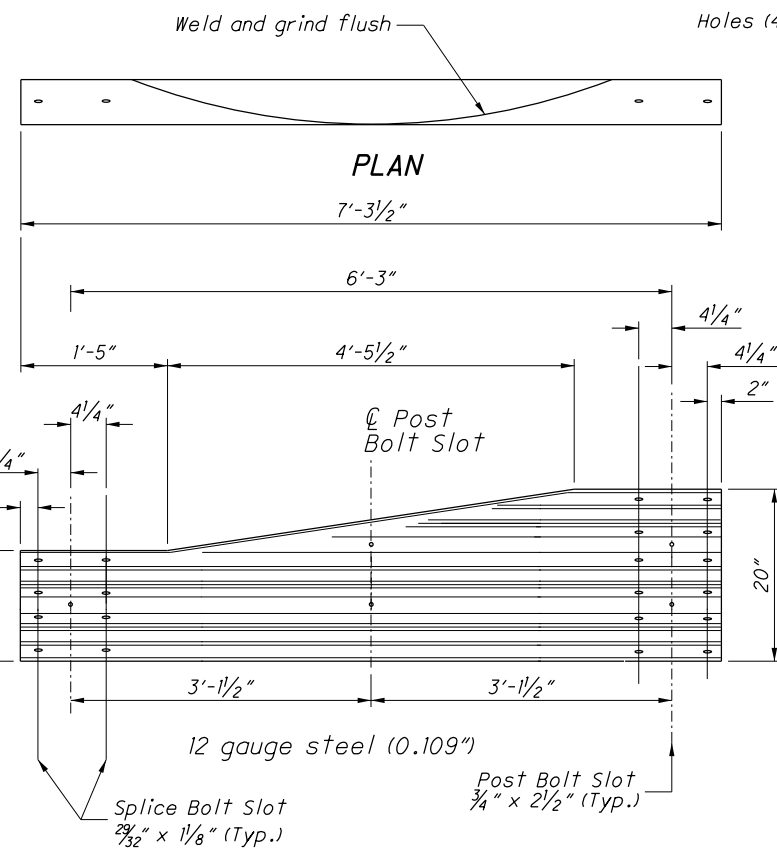
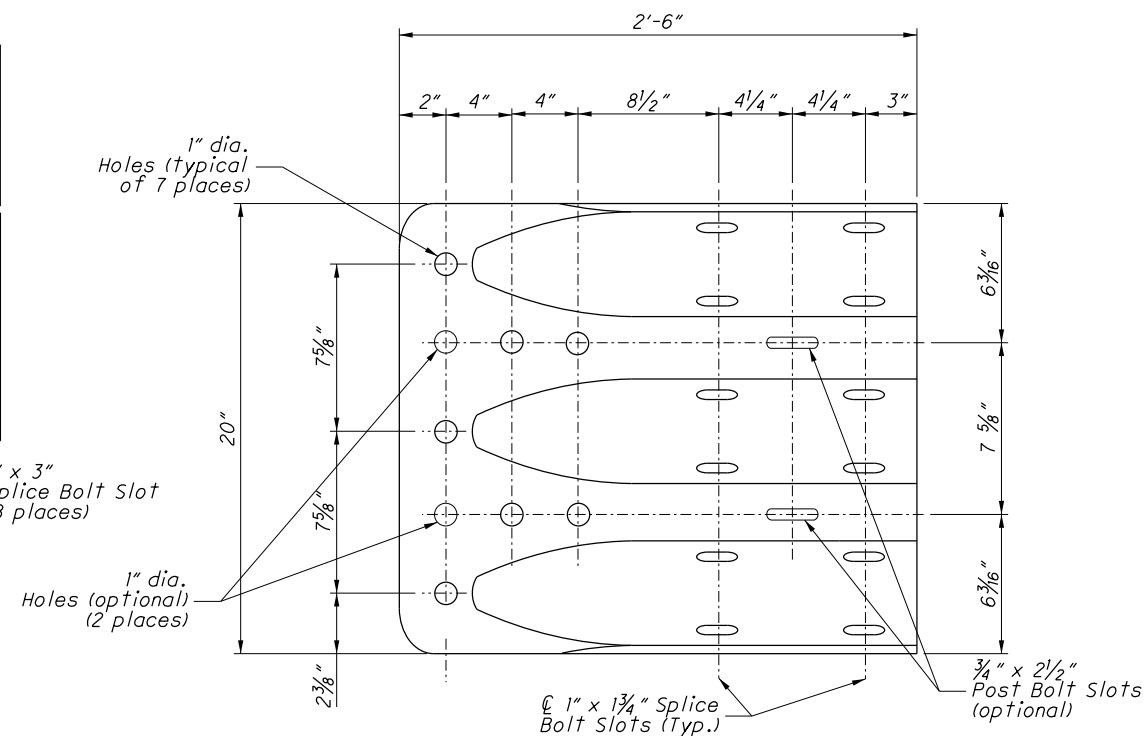
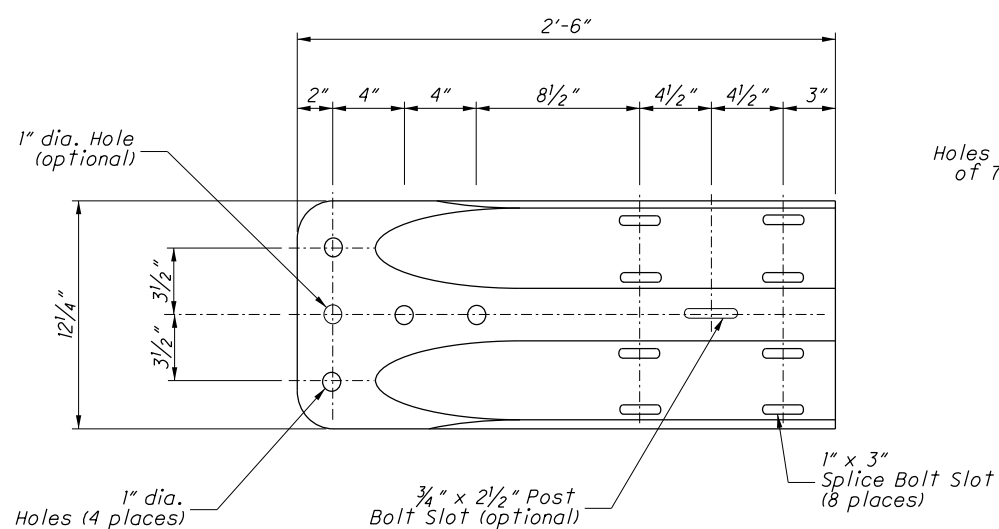
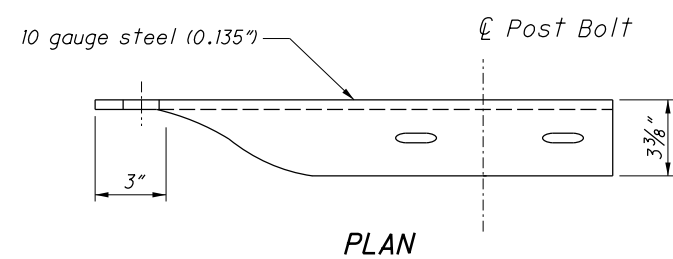
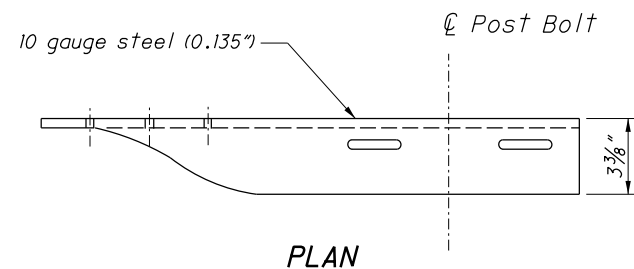
GENERAL: Components shown on this drawing are used in a variety of guardrail systems. See individual guardrail drawing for specific applications.

See CMS 606 for guardrail specifications not covered on these drawings.

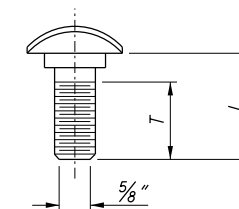
Refer to AASHTO M 180 for dimensional details of W-Beam and Thrie-Beam rail elements, related buffer and end sections, beam splices, post and splice bolts, nuts, and Type 1 W-Beam to Thrie-Beam Transition sections.

RAIL ELEMENTS: W-Beam Rail has an effective length of 12'-6" unless otherwise specified, with $\frac{3}{4}$ " x $2\frac{1}{2}$ " post bolt slots on 6'-3" centers regardless of post spacing. Field punch or drill bolt holes or slots for irregularly spaced posts as specified in CMS 606.04.

RAIL SPLICES: Lap splices between two rail elements or between a rail and terminal connector in the direction of traffic. Lap the buffer or flared end sections in the direction of traffic.



ELEVATION
THRIE-BEAM TERMINAL CONNECTOR



GUARDRAIL BOLT (For Post and Splice Bolts)		
L	T min.	Bolt Use
18" (Standard Rail)	4"	Type 5: WP/WB, PB
26" (Barrier Rail)		
10"	4"	Type 5: SP/WB, PB
1 1/4"	1 1/8"	Splice Bolt

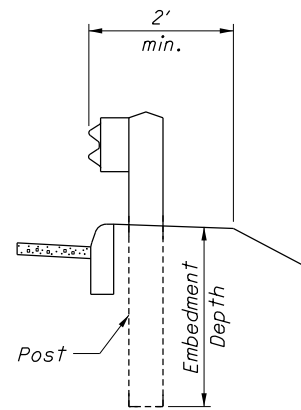
WP = Wood Post WB = Wood Blockout
SP = Steel Post PB = Plastic Blockout

Longer Bolt may be needed for round Wood Post larger than 8" dia.

ELEVATION
TYPE 2 TRANSITION SECTION
(Asymmetric W to Thrie-Beam)

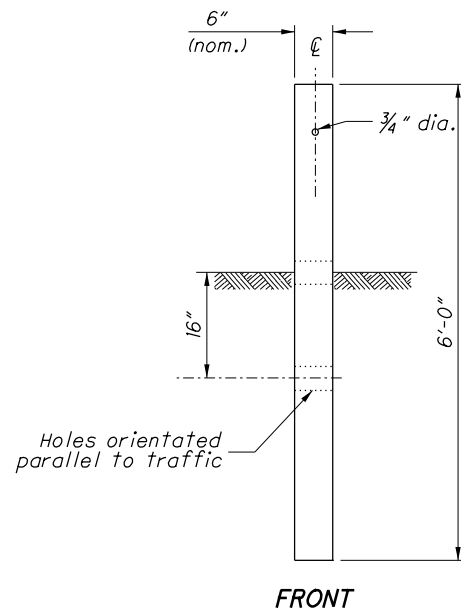
For details of Type 1 Transition Section (Symmetric), refer to AASHTO M 180, Figure 4.

ELEVATION
W-BEAM FLARED END SECTION



DETAIL A

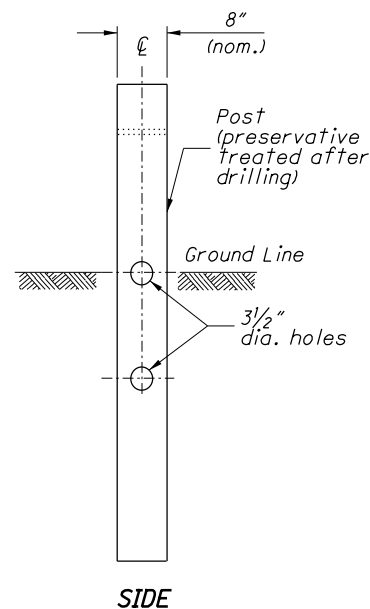
See POST EMBEDMENT DEPTH Note



FRONT

SIDE

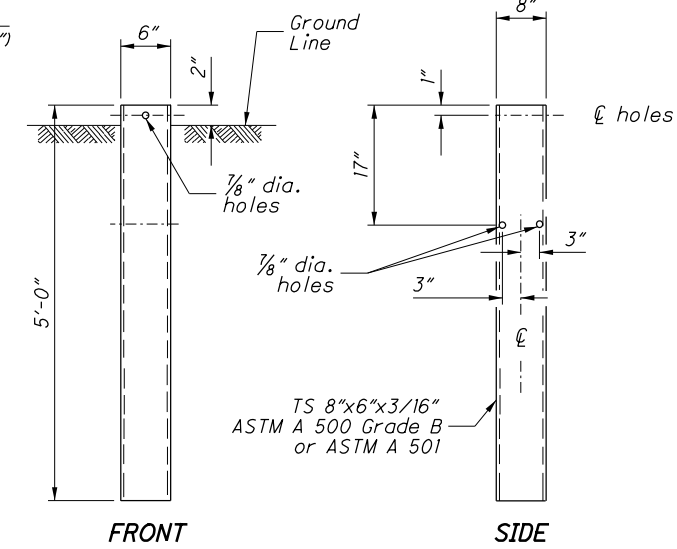
TYPE 1 BREAKAWAY CRT POST



FRONT

SIDE

TYPE 2 BREAKAWAY CRT POST



FRONT

SIDE

STEEL GROUND TUBE

NOTES

GUARDRAIL HEIGHT: For initial installation, construct the guardrail within $\pm 1"$ of the standard height, h , or **29"** to the top of W-Beam rail. (See MEASURING GUARDRAIL HEIGHT Detail.)

When subsequent projects, such as resurfacings, affect the height of existing guardrail, the finished height is to be within $\pm 2.5"$ of the standard height.

POST EMBEDMENT DEPTH: Standard embedment is 3'-5" min. Where less than 2' of graded shoulder width (10:1 or flatter) exists, measured from the face of the guardrail (see DETAIL "A"), use longer posts so that a minimum of 5'-5" embedment depth is provided. Payment for the longer posts will be made at the unit price bid for **ITEM 606 - GUARDRAIL POST, 9', Each.**

SPECIAL POST MOUNTINGS: Install posts located over a drainage inlet or structure as shown in the FOOTING ANCHOR Detail, or anchor per the details shown on **SCD GR-2.2.**

Install posts located over a footing with a cover of less than 2'-6" with a footing anchor as detailed here. (A plate, as detailed on SECTION B-B of **SCD GR-2.2**, may be used as an alternative attachment method.) Where the cover is between 2'-6" and 3'-5", the footing anchor may be omitted and the post encased instead with 4" (min.) of concrete.

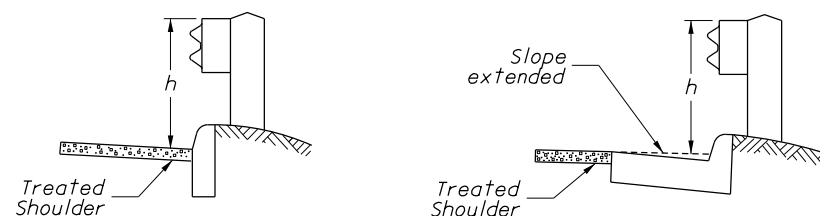
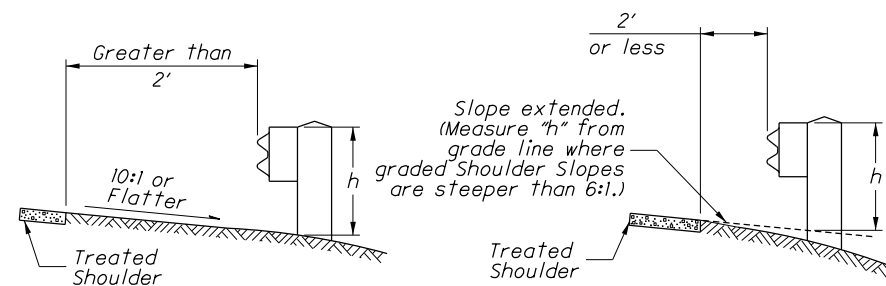
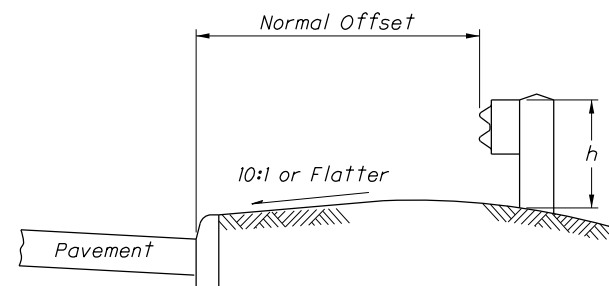
Do not drive posts located over a culvert with less than 4'-3" of cover; instead set in drilled or dug holes. Where the available post embedment depth is less than 3'-5", encase the post with a minimum of 4" concrete.

All costs associated with special post mountings are included in the unit price bid of Item 606 Guardrail of the type specified in the plans.

ANCHORS: Holes and grouting shall comply with CMS 510. Use either cement or non-shrink, nonmetallic grout.

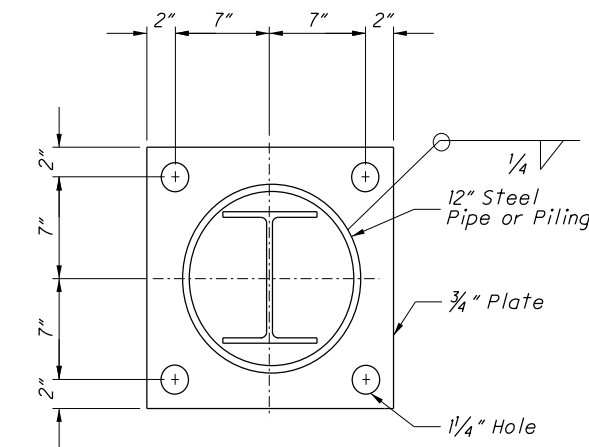
Expansion shield anchors as specified in CMS 712.01 may be substituted except where concrete deterioration has occurred, as determined by the Engineer. Where self-drilling anchors are used, drill the holes with the expansion shield (not by a drill bit) and install the shield flush with the concrete surface.

PROTECTIVE COATING: In lieu of the complying with CMS 710.06, coat expansion shields, anchors and concrete insert anchor assemblies embedded in concrete in accordance with ASTM A 153 or be of stainless steel. Any bolts screwed into these devices shall meet CMS 710.06. (See sheet 3 for Concrete Insert Anchor Assembly Detail.)

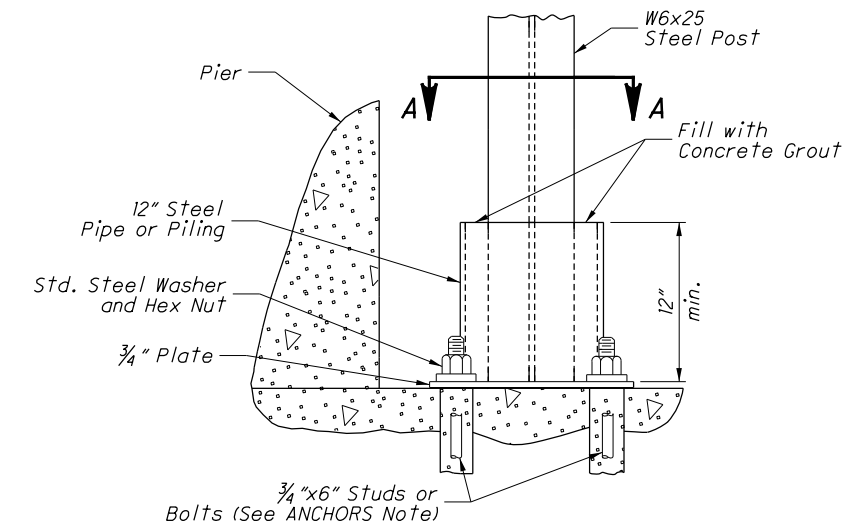


h = Standard Height (See GUARDRAIL HEIGHT Note)

MEASURING GUARDRAIL HEIGHT

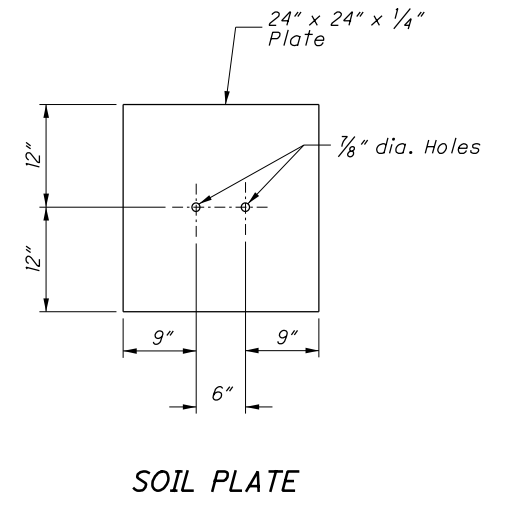
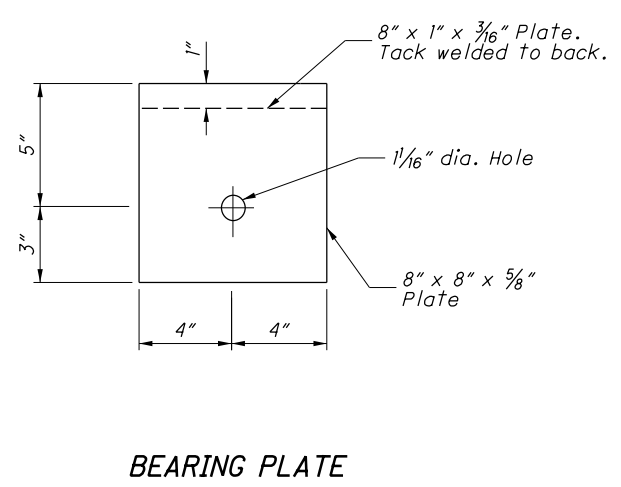
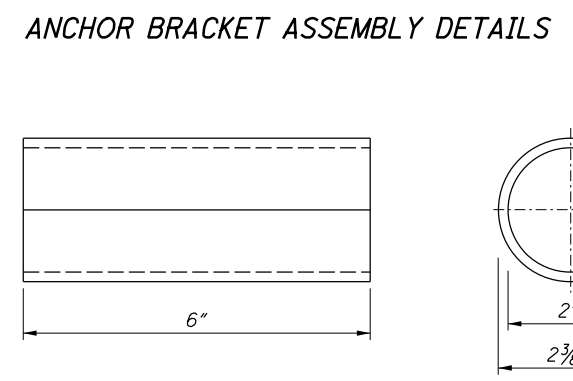
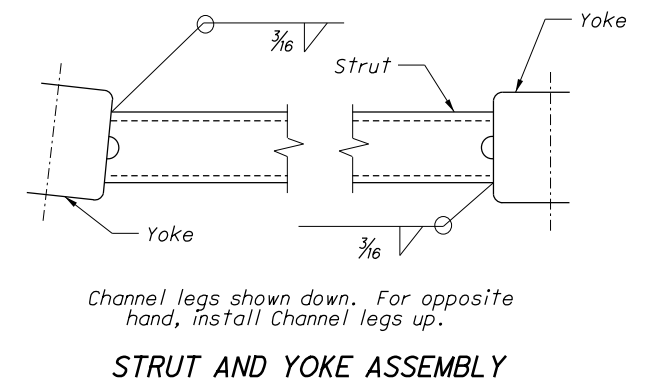
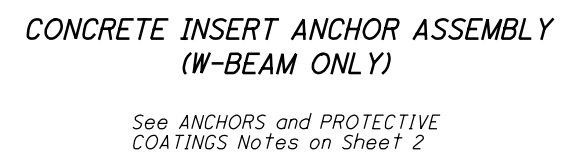
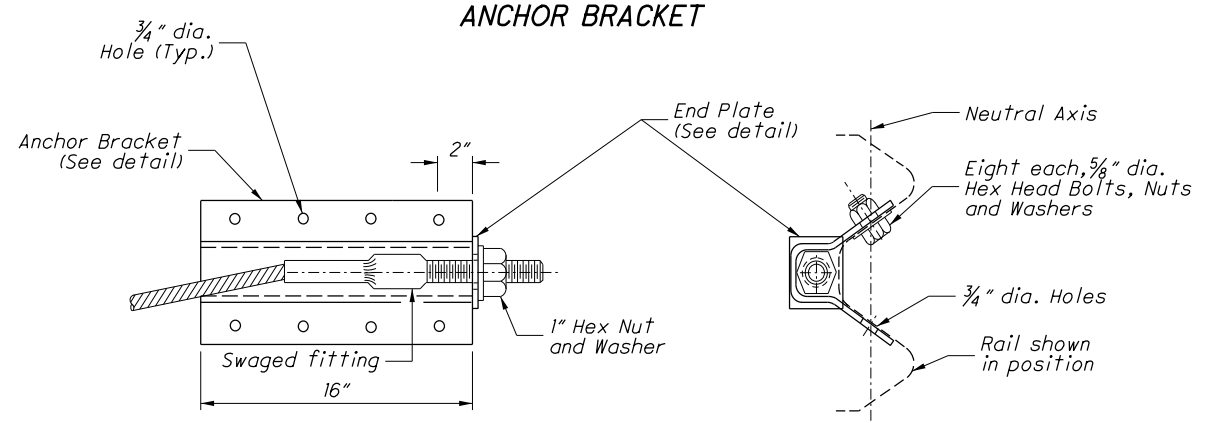
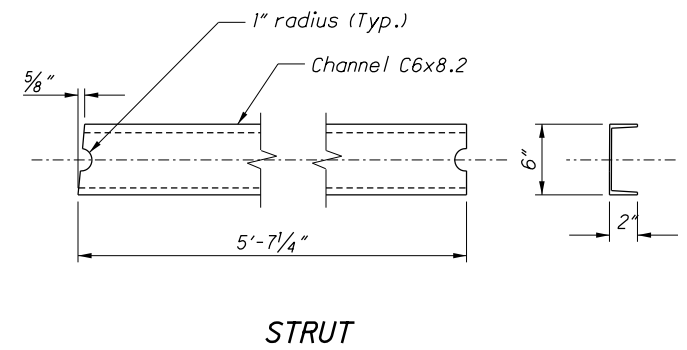
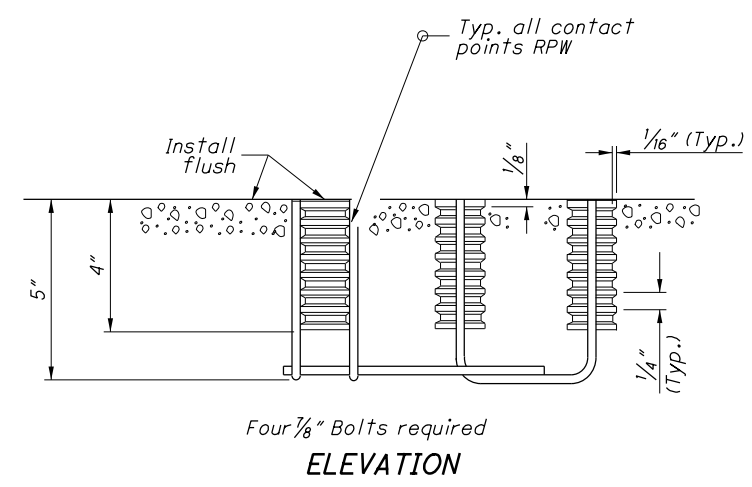
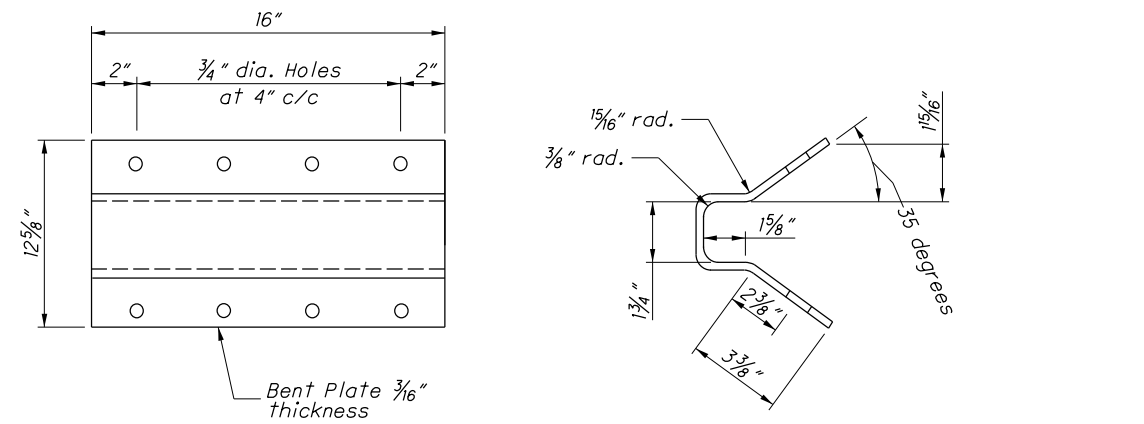
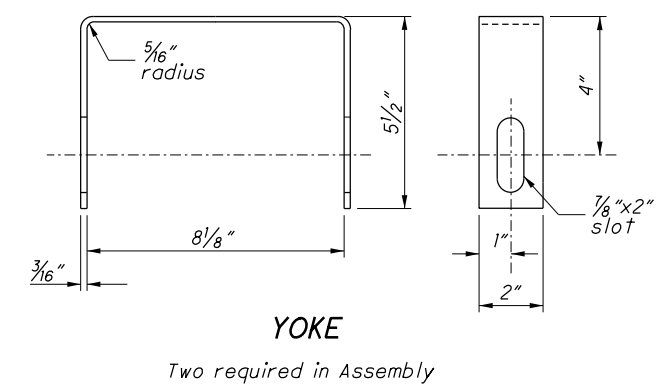
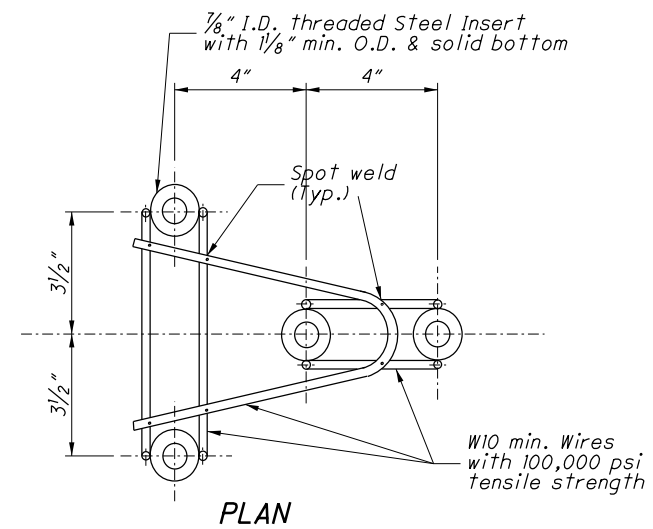
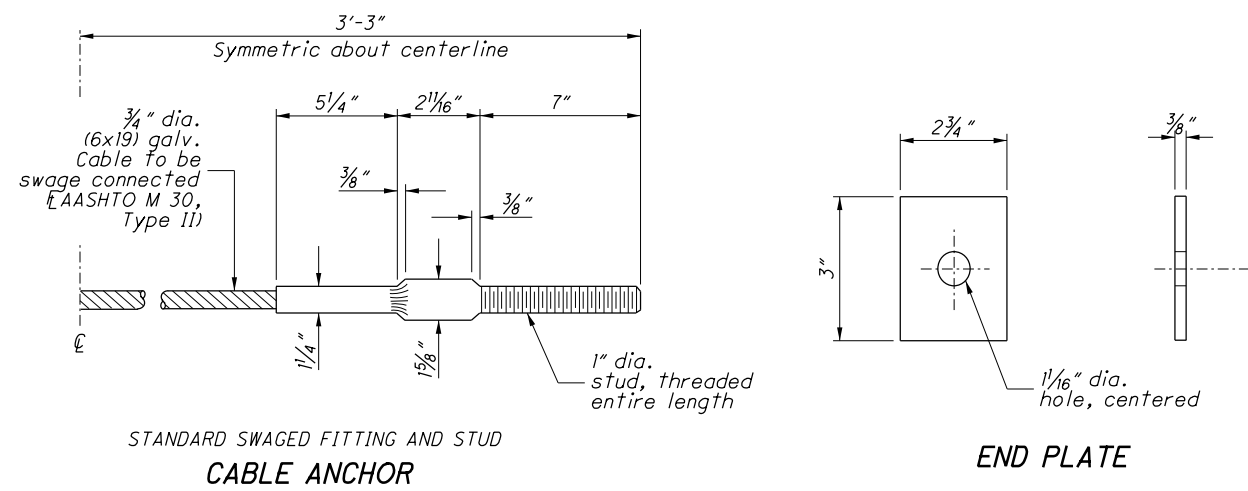


SECTION A-A



ELEVATION FOOTING ANCHOR

See SPECIAL POST MOUNTINGS Note.



NOTES

RAIL: Use W-Beam rail meeting AASHTO M 180 Type II Class A, as specified in CMS 606.

POSTS: Posts may be constructed of wood or steel. Wood posts may be round or 6"x8" square-sawed.

Use round wood posts on runs of single-sided rail. The round posts shall be 8"±1 in diameter at the top and not more than 3" larger at the butt with a uniform taper.

Fabricated wood posts with square ends. Posts shall be pressure-treated as per CMS 710.14. Bore bolt holes and, if required, trim the tops of posts after the posts are set.

Steel posts are to be W6x9 or W6x8.5 galvanized steel. Use the same type of post throughout the length of the project unless otherwise specified in the plans or permitted by the Engineer.

All posts are 6'-0" long unless specified otherwise in the Contract Document. Posts may be set in drilled holes or may be driven to grade.

WELDED BEAM POSTS: Welded beam guardrail posts may be used for Item 606, Guardrail, provided the web and flange sizes are as shown here. Welding of the web to the flanges must comply with ASTM A 769, Class 1, using Grade 36 steel [250 MPa yield point] with the following exceptions:

- Sec. 7.2 Test reports of tensile properties for each lot shall accompany each shipment.
- Sec. 12 Beams that have imperfections repaired by welding shall not be accepted for use in Item 606.
- Sec. 13 Random samples shall be tested by the Department from materials delivered to the project site, or other locations designated by the Laboratory.

ALTERNATE POSTS: Engineered guardrail posts having met NCHRP 350 criteria, and listed on the **Office of Materials Management's** Approved List are permitted as an equal alternate when installed according to the Manufacturer's instructions and within the limitations shown on the Approved List.

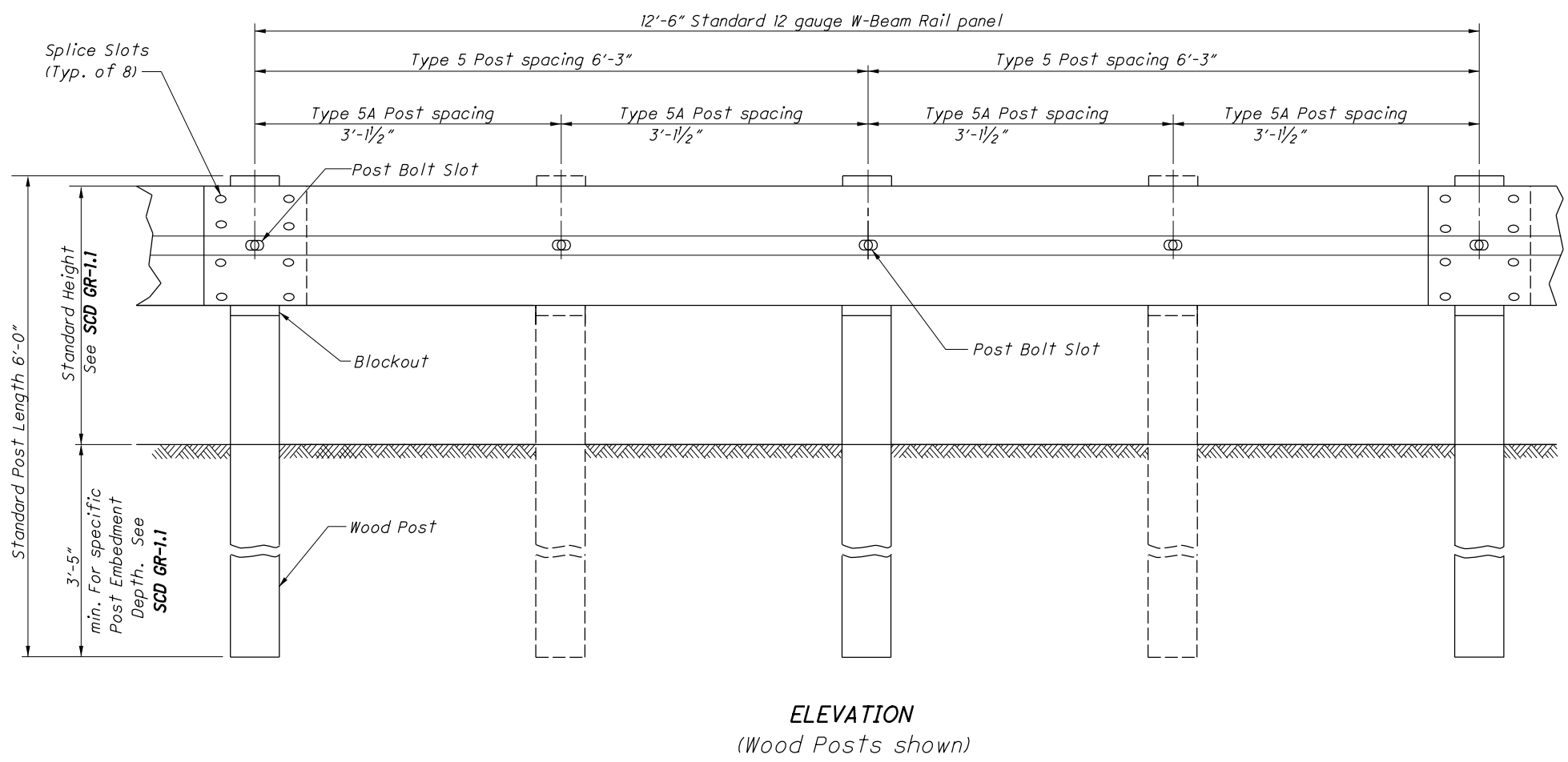
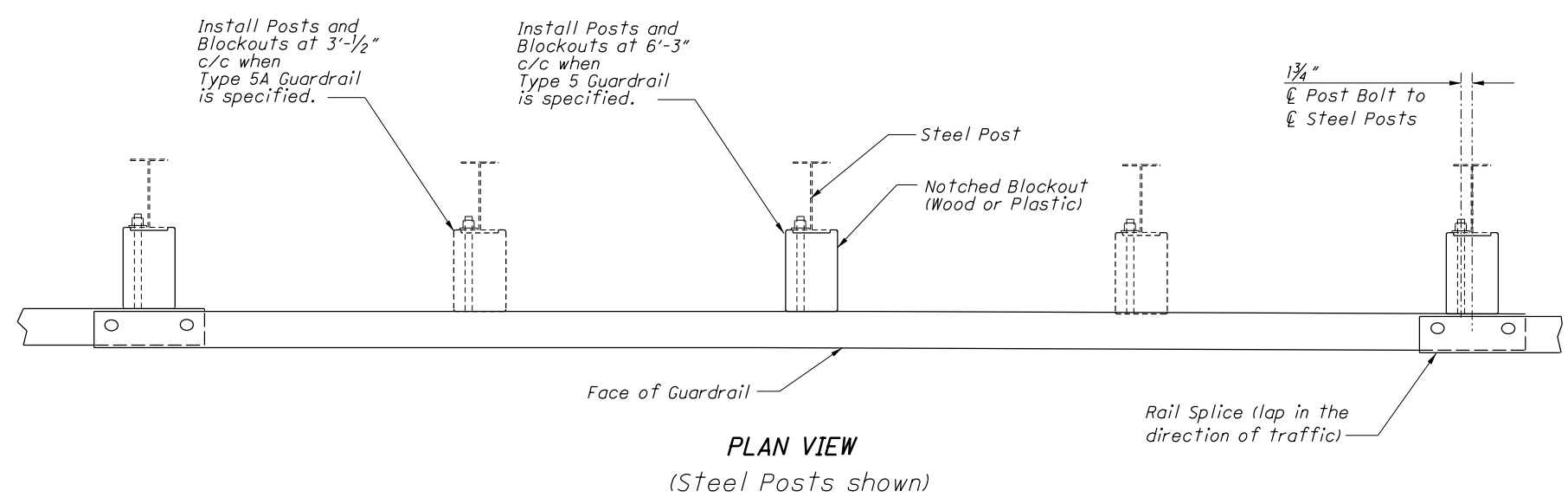
BLOCKOUTS: Blockout dimensions are dependent on post used. Wood Blockouts are to be pressure treated as specified in CMS 710.14. Bore bolt holes. Approved alternate blockouts may be used in lieu of the wood blockouts shown. The approved list is maintained by the **Office of Roadway Engineering**.

WASHERS: Install appropriate sized standard galvanized steel washers on the nut side of bolts installed on wood posts.

DELINEATION: For barrier reflectors, see CMS 626.

MISCELLANEOUS: For other guardrail details, see **SCD GR-1.1**.

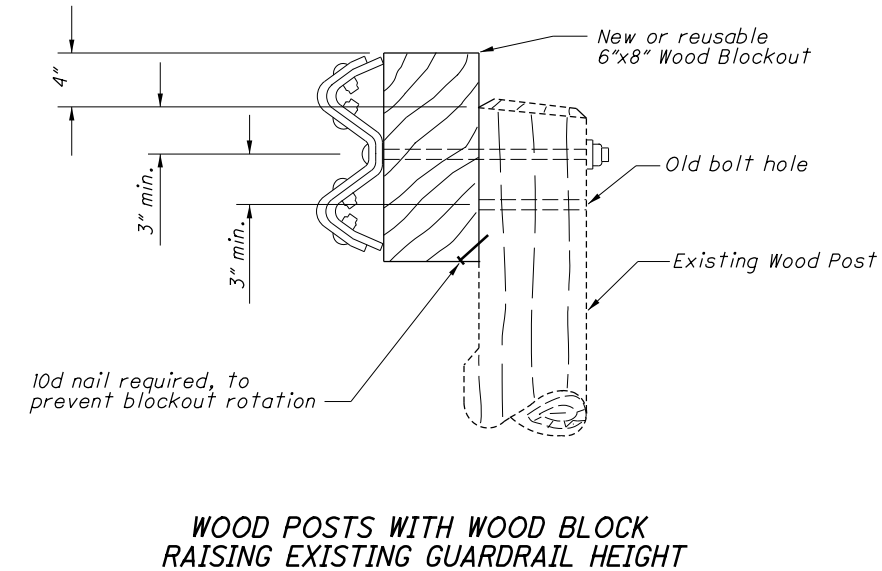
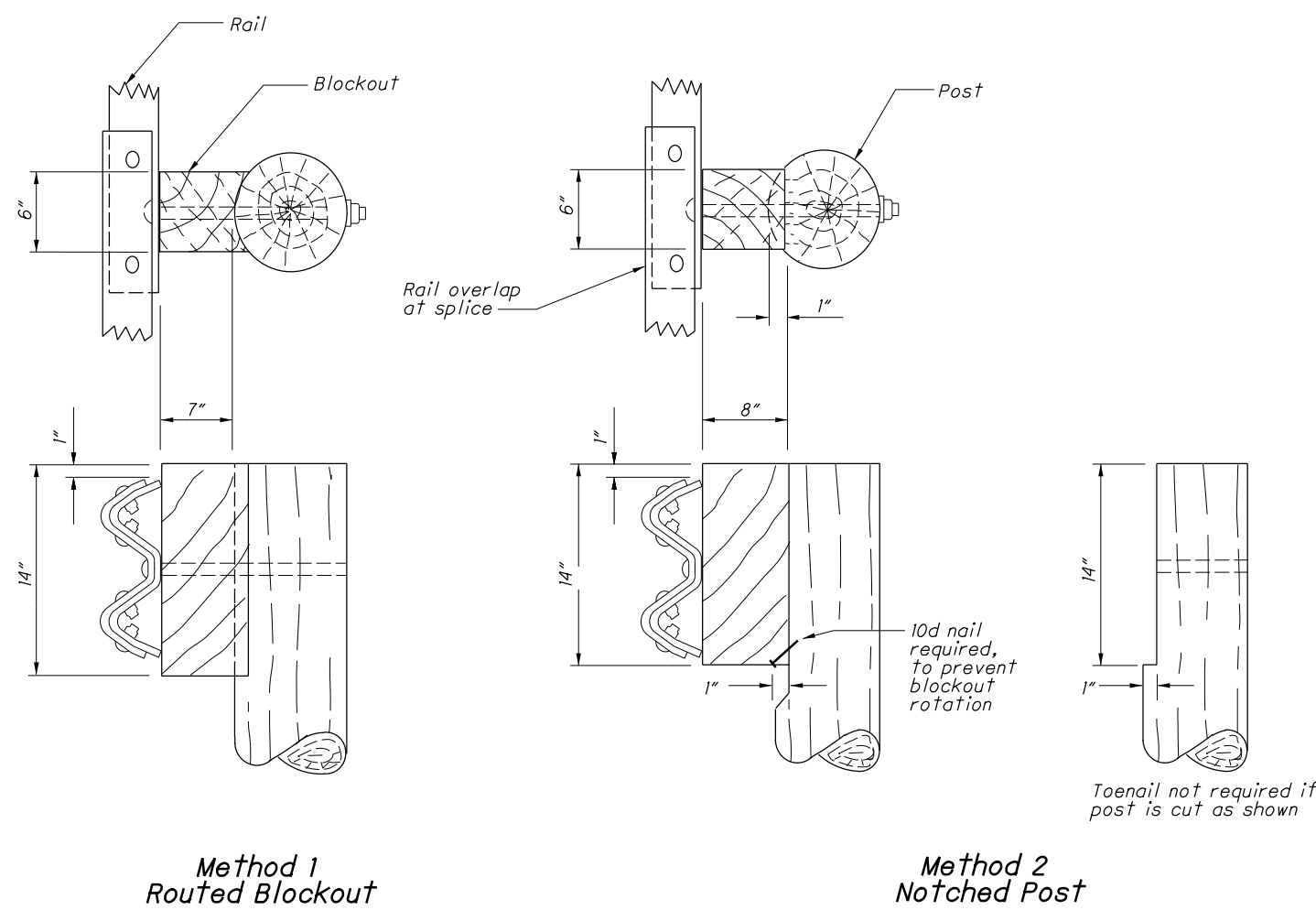
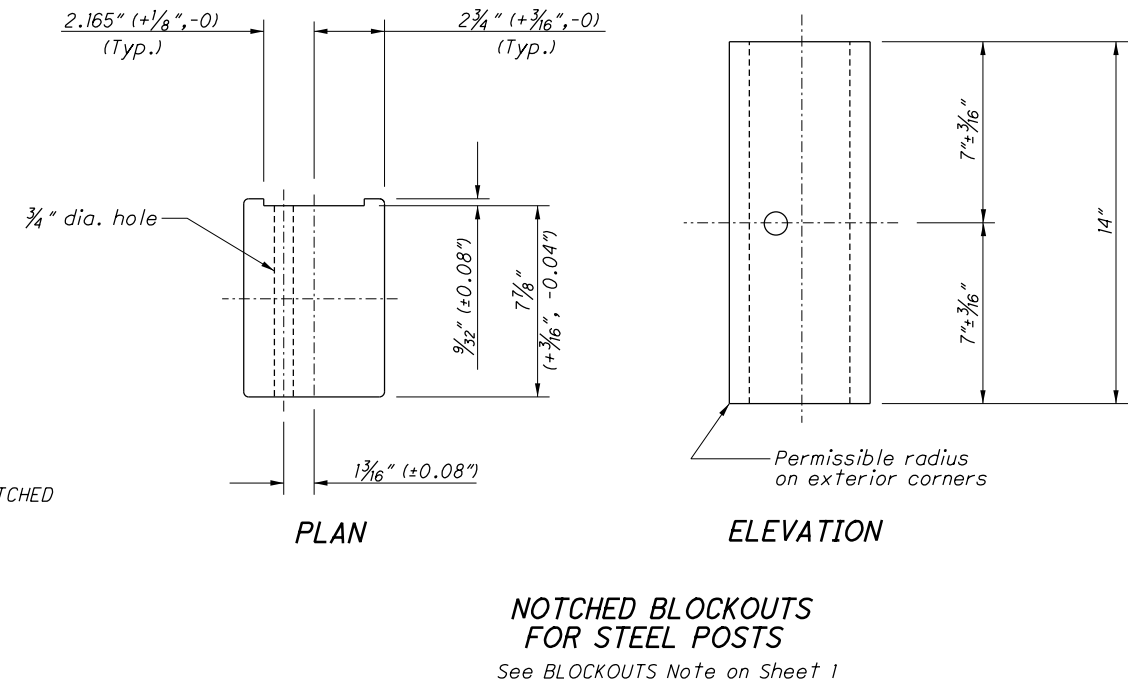
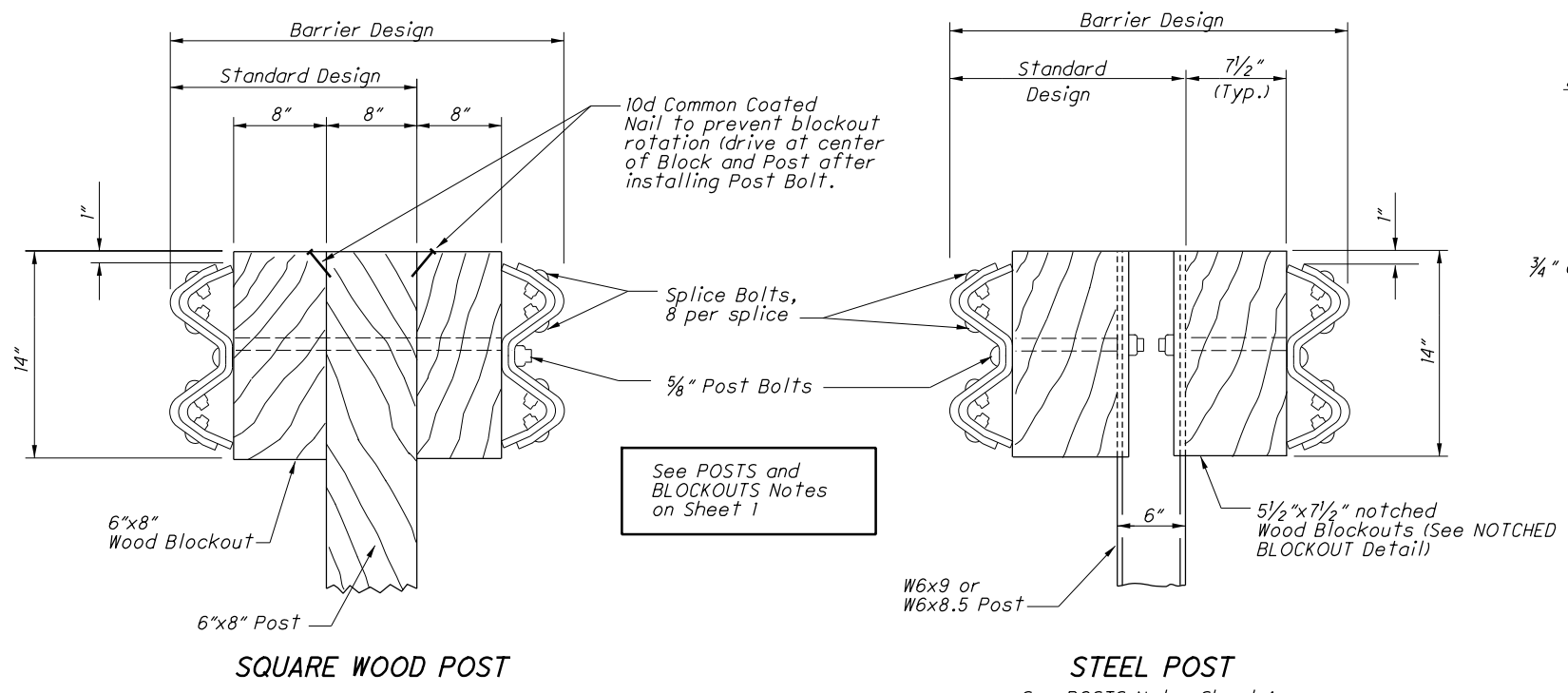
STEEL BEAM POSTS (English)				
Size	Beam depth	Flange width	Flange thickness	Web thickness
Rolled W6x8.5	5.8"	3.94"	0.193"	0.170"
Rolled W6x9	5.9"	3.94"	0.215"	0.170"
Welded 6x8.5	6.0"	3.94"	0.193"	0.170"
Welded 6x9	6.0"	3.94"	0.215"	0.170"



ELEVATION
(Wood Posts shown)

DESIGNED	REVIEWED
REVISION DATE	CHECKED

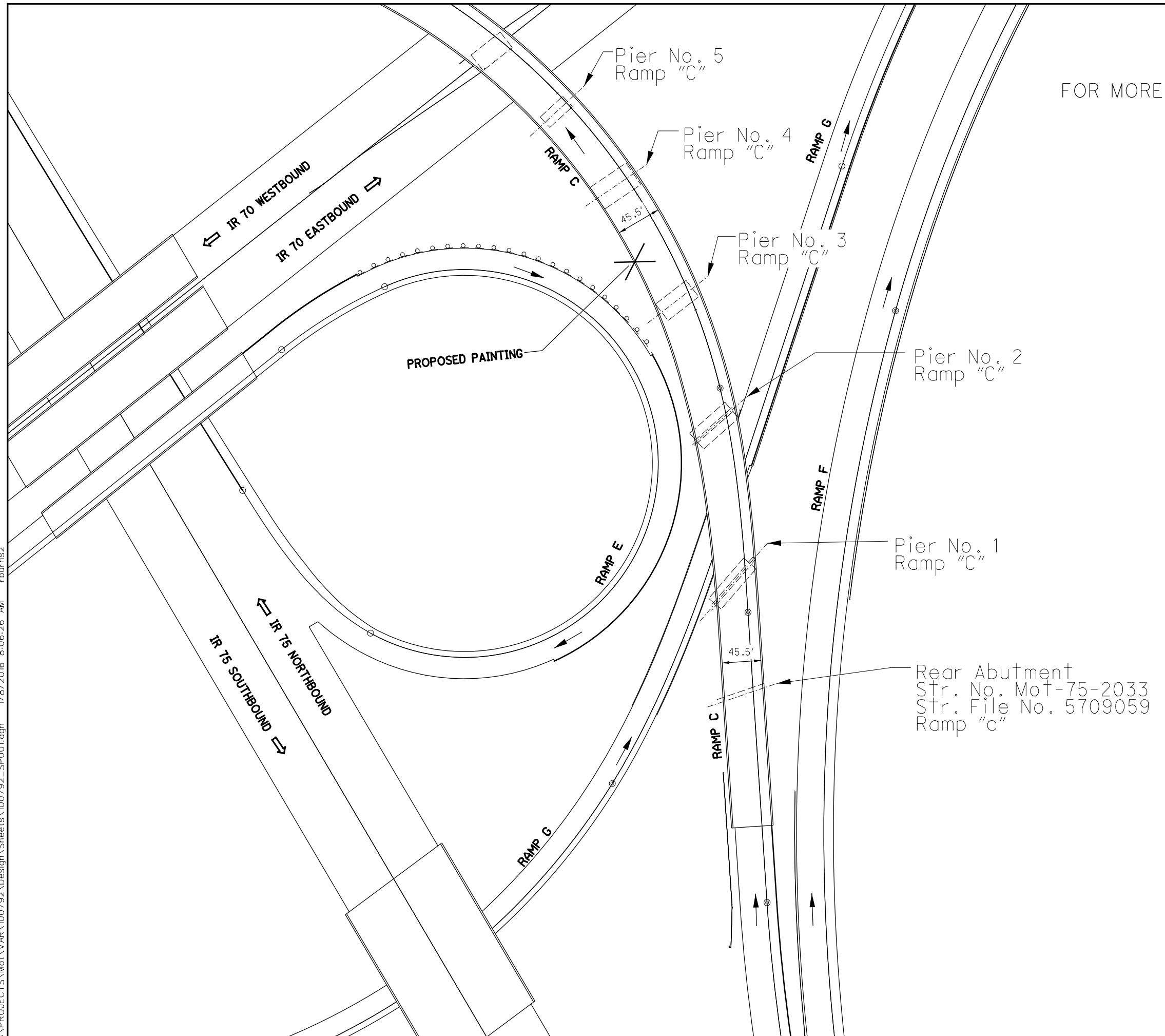
PIS NUMBER



Alternate methods of placing the Blockouts on round Posts may be submitted for consideration and approved by the Engineer.

ROUND WOOD POSTS
Single Sided runs only (Standard Design)

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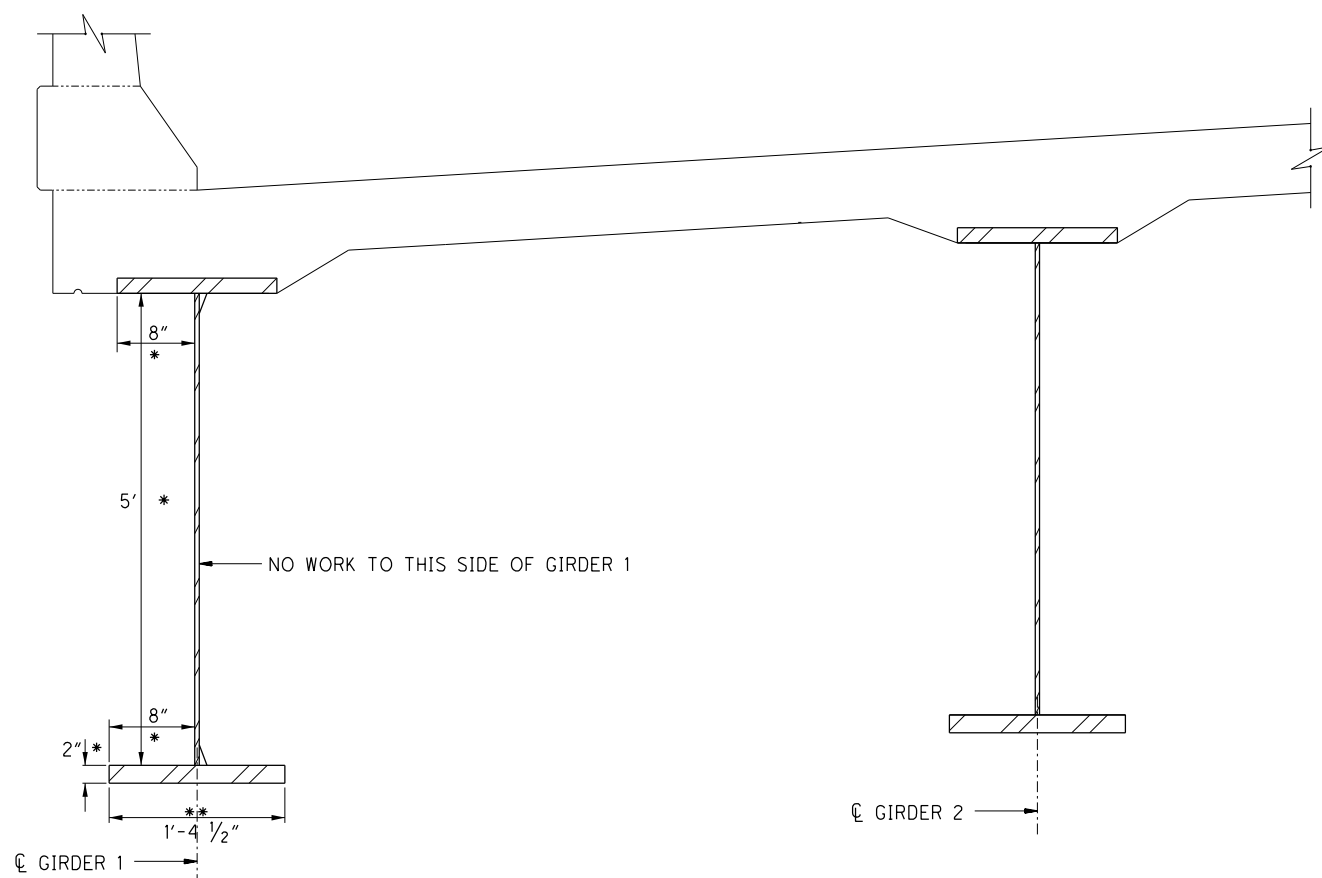
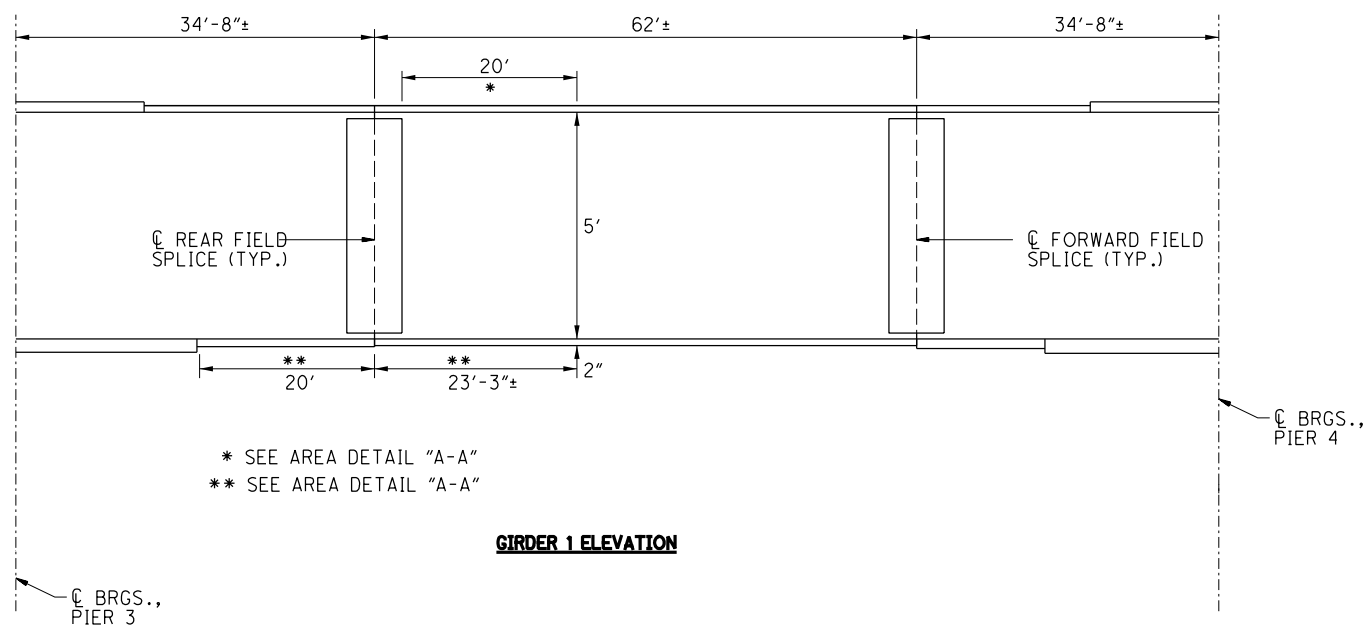
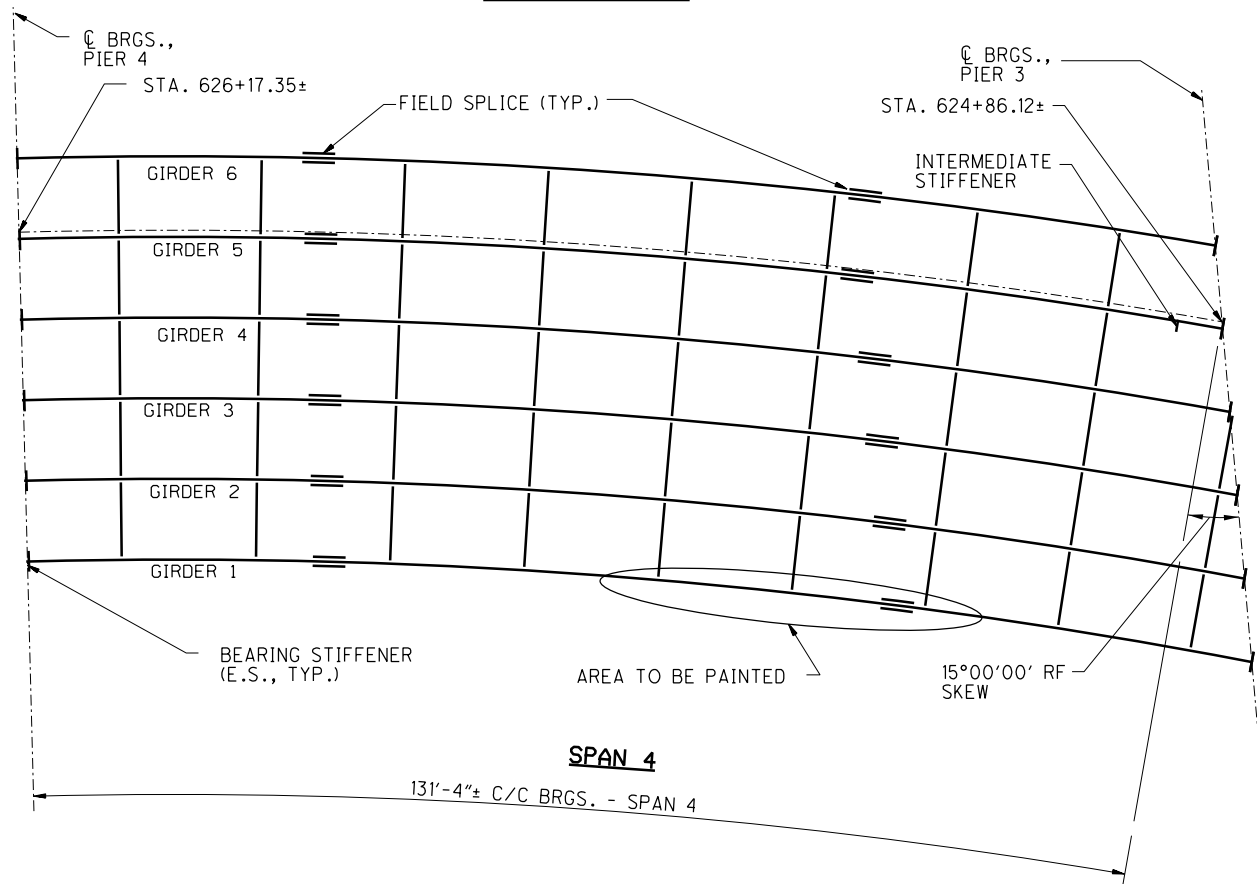
FOR MORE DETAILS SEE SHEET 51.



EXISTING STRUCTURE	
TYPE:	20 SPAN CONTINUOUS COMPOSITE STEEL PLATE GIRDERS (A709M GR50, PAINTED) WITH REINFORCED CONCRETE DECK, PIERS, AND STUB ABUTMENT ON MSE WALL (REAR), STUB ABUTMENT (FORWARD)
LENGTH OF SPANS:	124.6', 157.5', 131.2', 131.2', 98.4', 88.9', 117.8', 134.5', 134.5', 134.5', 101.7', 86.5', 130', 131.2', 85.3', 98.4', 144.3', 134.5', 118', 88.5', MEASURED @ ABUTMENT BRGS. - @ PIERS - @ ABUTMENT BRGS.
ROADWAY:	45.6' TOE/TOE PARAPETS
SIDEWALK:	NONE
DESIGN LOADING:	HS25 (CASE I) AND THE ALTERNATE MILITARY LOADING, FWS = 60lbs/Sq. Ft.
SKEWS:	15°00' RF (REAR ABUT.), 45°00' RF (PIER 1), 30°00' RF (PIER 2), 15°00' RF (PIER 3), 0°00' (PIER 4, 5), 12°18'03" LF (PIER 6), 0°00' (PIERS 7-11), 7°54'07" RF (PIER 12), 0°00' (PIERS 13-16), 30°00' LF (PIER 17), 45°00' LF (PIER 18), 30°00' LF (PIER 19), 0°00' (FORWARD ABUT.), MEASURED FROM THE NORMAL TO THE LOCAL TANGENT
WEARING SURFACE:	MONOLITHIC CONCRETE
APPROACH SLABS:	AS-1-81 (25' REAR, 25' FORWARD)
ALIGNMENT:	HORIZONTALLY CURVED WITH SPIRALS (RADIUS = 656', LENGTH OF SPIRALS 230' & 328')
SUPERELEVATION:	VARIES, 0.19'/' MAX.
LATITUDE:	N 39°51'58"
LONGITUDE:	W 84°11'15"
STRUCTURE FILE NUMBER:	5709059

DESIGNED REB CHECKED	DRAWN REB REVISED	REVIEWED DATE	STRUCTURE FILE NUMBER 5709059	DESIGN AGENCY ODOT - DISTRICT 7 PLANNING & ENGINEERING
SITE PLAN				BRIDGE No. MOT-75-2033 RAMP "C" OVER IR-70/IR-75 INTERCHANGE
MOT-VAR VAR				
PID No. 100792				1 / 2
50				51

FRAMING PLAN



DETAIL "A-A"

TOTAL AREAS:

- * 6.5'x20' = 130 Sq. Ft.
- ** 1.3750' x 43.25' = 59.5 Sq. Ft.

ITEMS OF WORK: PAINTING STRUCTURAL STEEL (PAINT CODE FS-595B-15065)

ITEM 514, SURFACE PREPARATION OF EXISTING STEEL	189.5 SQ. FT.
ITEM 514, FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	189.5 SQ. FT.
ITEM 514, FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	189.5 SQ. FT.
ITEM 514, FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	189.5 SQ. FT.
ITEM 514, GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	1 MNHR
ITEM 514, FINAL INSPECTION REPAIR	1 EACH

QUANTITIES CARRIED TO GENERAL SUMMARY SHEET.

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