

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MOT-75-0.76

MIAMI TOWNSHIP
MONTGOMERY COUNTY

PROJECT DESCRIPTION

THIS PROJECT WILL CONSTRUCT AN ADDITIONAL WESTBOUND RIGHT TURN LANE, CURB AND GUTTER, AND RELOCATE THE BIKEPATH FOR APPROXIMATELY 700' BETWEEN AUSTIN LANDING AND THE I-75 NORTHBOUND ENTRANCE RAMP. THIS PROJECT WILL ALSO INCLUDE PROPOSED STORM SEWER, PAVEMENT OVERLAY, REPLACE SIGNALS, AND REVISE TRAFFIC CONTROL TO ACCOMMODATE THE ADDITIONAL LANE. SR-741 TRAFFIC CONTROL WILL BE REVISED.

PROJECT EARTH DISTURBED AREA: 1.32 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 4.9 ACRES

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.

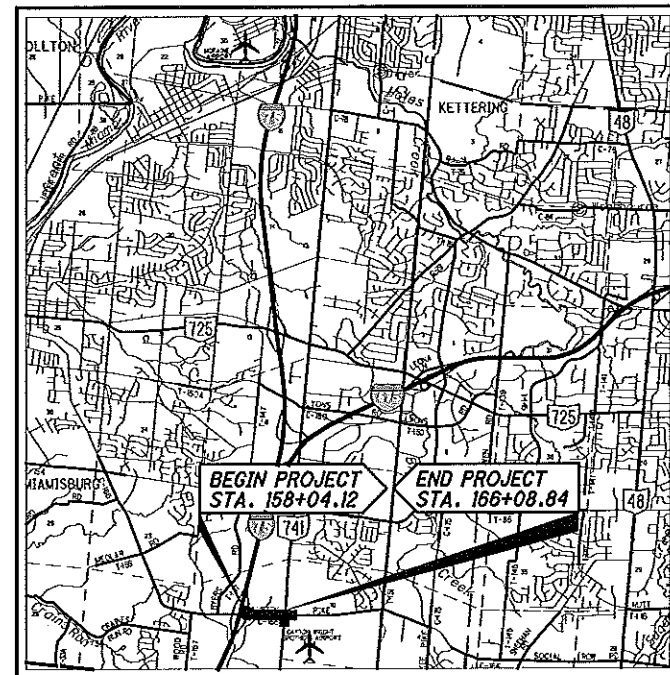
2016 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT FOR THE BIKEPATH AS DESCRIBED ON SHEET 10 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED Randy Chevalley, P.E. P.S. /RPH
DATE 11-28-18 DISTRICT DEPUTY DIRECTOR

APPROVED [Signature]
DATE 1/3/19 DIRECTOR, DEPARTMENT OF TRANSPORTATION



LOCATION MAP

LATITUDE: 39°35'48" LONGITUDE: 84°14'11"



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

DESIGN DESIGNATION	I-75	SR 741	AUSTIN BLVD
CURRENT ADT (2018)	115,900	31,570	36,740
DESIGN YEAR ADT (2038)	146,460	54,250	46,200
DESIGN HOURLY VOLUME (2038)	7,620	2,690	2,940
DIRECTIONAL DISTRIBUTION	0.53	0.56	0.52
TRUCKS (24 HOUR B&C)	0.17	0.01	0.02
DESIGN SPEED	70 MPH	55 MPH	45 MPH
LEGAL SPEED	65 MPH	50 MPH	45 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	URBAN INTERSTATE	URBAN PRINCIPAL ARTERIAL	URBAN MINOR ARTERIAL
NHS PROJECT	YES	YES	YES

DESIGN EXCEPTIONS

ENGINEERS SEAL:



SIGNED: Laurence A. Sack
DATE: 10/26/2018

ENGINEERS SEAL:



SIGNED: Matthew A. Gardner
DATE: 10/26/2018

STANDARD CONSTRUCTION DRAWINGS

										SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-1.1	7/28/00	DM-4.4	1/15/16	MT-105.10	7/19/13	TC-71.10	1/19/18			800-2016	1/18/19
BP-2.1	7/17/15			MT-110.10	7/19/13	TC-73.20	7/21/17			804	10/19/18
BP-2.2	7/18/08	HL-10.11	7/20/18			TC-81.21	7/20/18			816	7/20/18
BP-2.5	7/19/13	HL-10.12	1/20/17	TC-16.21	7/20/18	TC-83.20	7/21/17			821	4/20/12
BP-3.1	7/18/14	HL-20.11	4/21/17	TC-21.20	7/20/18	TC-85.10	7/21/17			832	10/19/18
BP-5.1	7/20/18	HL-30.11	7/20/18	TC-22.10	10/18/13	TC-85.20	7/20/18			904	10/19/18
BP-7.1	7/20/18	HL-30.22	1/17/14	TC-22.20	1/17/14					907	1/20/12
		HL-60.11	7/21/17	TC-41.20	10/18/13	ITS-14.11	7/17/15			916	1/19/18
CB-2.1	7/20/18			TC-41.40	10/18/13					921	4/20/12
CB-2.2	7/20/18	MT-95.30	7/21/17	TC-42.20	10/18/13						
		MT-95.31	7/21/17	TC-51.11	1/15/16						
MT-1.2	1/15/16	MT-95.32	7/21/17	TC-51.12	1/15/16						
		MT-95.41	7/21/17	TC-52.10	10/18/13						
DM-1.1	7/21/17	MT-97.12	1/20/17	TC-52.20	7/20/18						
DM-1.2	1/18/13	MT-101.70	7/20/18	TC-65.10	1/17/14						
DM-4.1	7/20/18	MT-102.10	1/20/17	TC-65.11	7/21/17						

FEDERAL PROJECT NO.
E170(932)

PID NO.
104979

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NONE

MOT-75-0.76

1
106

Conformed Set

MOT - IR 75-00.76

190189 PID - 104979

Dist 7 3/21/2019

Contact Proposal Available @

www.contracts.dot.state.oh.us/home

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UNDERGROUND UTILITIES
CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

OHIO Utilities Protection SERVICE
Call Before You Dig
1-800-362-2764
(Non-members must be called directly)

OIL & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE
1-800-925-0988

PLAN PREPARED BY:



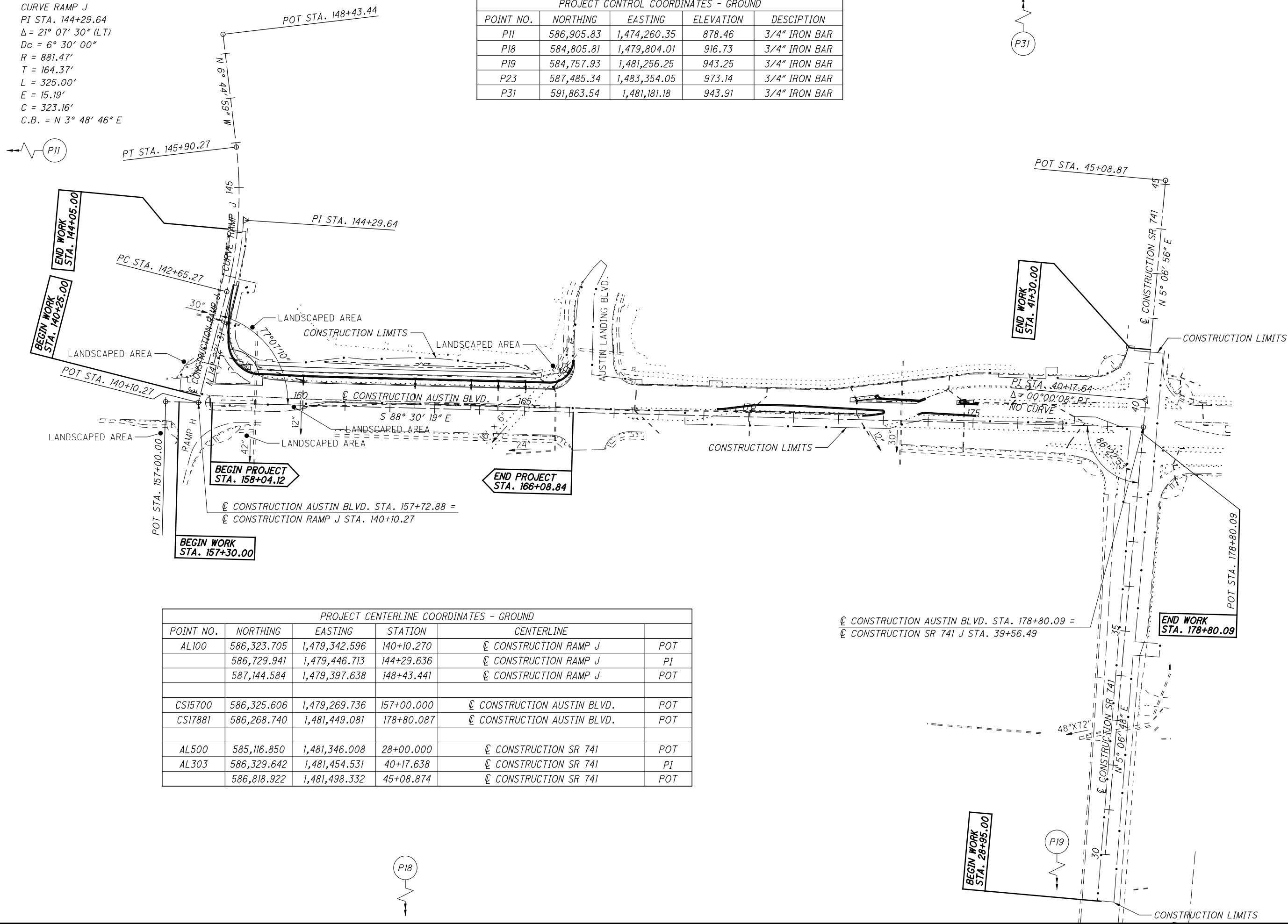
LJB Inc. • 2503 Newmark Drive
Miamisburg, OH 45342
(937) 259-5200 tel • (937) 259-5100 fax • LJBInc.com

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CURVE RAMP J
PI STA. 144+29.64
 $\Delta = 21^\circ 07' 30''$ (LT)
 $D_c = 6^\circ 30' 00''$
 $R = 881.47'$
 $T = 164.37'$
 $L = 325.00'$
 $E = 15.19'$
 $C = 323.16'$
C.B. = N $3^\circ 48' 46''$ E

PROJECT CONTROL COORDINATES - GROUND				
POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
P11	586,905.83	1,474,260.35	878.46	3/4" IRON BAR
P18	584,805.81	1,479,804.01	916.73	3/4" IRON BAR
P19	584,757.93	1,481,256.25	943.25	3/4" IRON BAR
P23	587,485.34	1,483,354.05	973.14	3/4" IRON BAR
P31	591,863.54	1,481,181.18	943.91	3/4" IRON BAR



SCHEMATIC PLAN

MOT-75-0.76

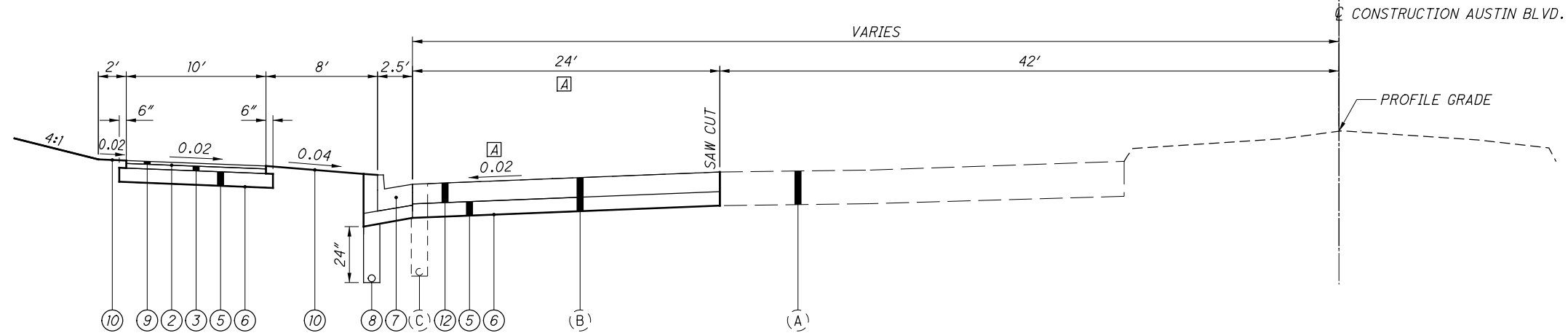
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- 1 ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)
- 2 ITEM 407 - TACK COAT
- 3 ITEM 442 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)
- 4 ITEM 301 - 8" ASPHALT CONCRETE BASE, PG64-22 (2 - 4" LIFTS)
- 5 ITEM 304 - 6" AGGREGATE BASE
- 6 ITEM 204 - SUBGRADE COMPACTION
- 7 ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
- 8 ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC

- 9 ITEM 441 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
- 10 ITEM 659 - SEEDING AND MULCHING
- 11 ITEM 609 - CURB, TYPE 6
- 12 ITEM 452 - 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1
- 13 ITEM 254 - 1 1/2" PAVEMENT PLANING ASPHALT CONCRETE (SEE PLAN SHEETS FOR LOCATIONS)
- 14 ITEM 451 - REINFORCED CONCRETE PAVEMENT, MISC: 4" ENHANCED CONCRETE PAVEMENT
- 15 ITEM 204 - 12" EXCAVATION OF SUBGRADE
- 16 ITEM 203 - 12" GRANULAR MATERIAL, TYPE C
- 17 ITEM 204 - GEOTEXTILE FABRIC

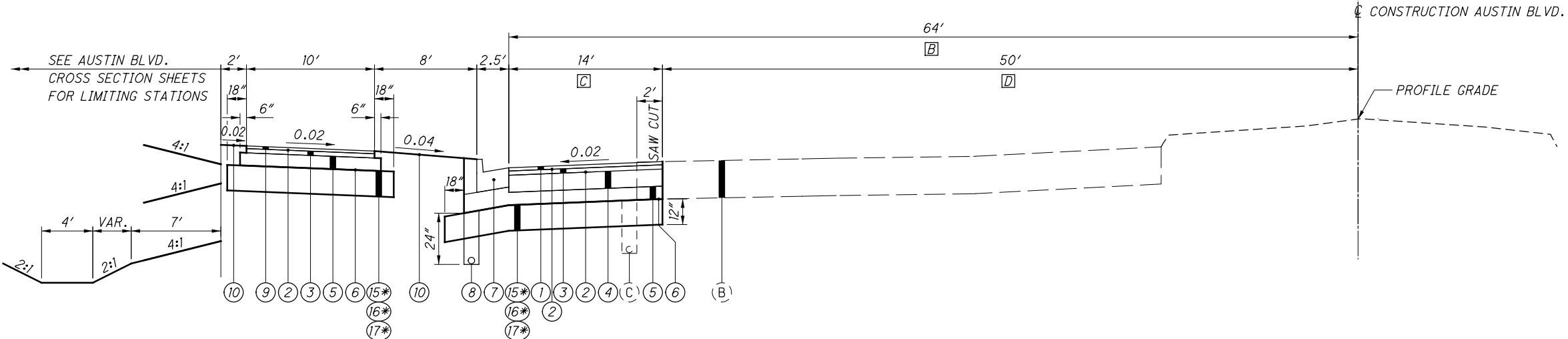
- A EXISTING CONCRETE PAVEMENT:
9" NON-REINFORCED CONCRETE PAVEMENT
6" AGGREGATE BASE
- B EXISTING ASPHALT PAVEMENT:
1 1/2" ASPHALT CONCRETE SURFACE
2" ASPHALT CONCRETE INTERMEDIATE COURSE
8" ASPHALT CONCRETE BASE
6" AGGREGATE BASE
- C EXISTING UNDERDRAIN

A VARIES - SEE INTERSECTION DETAILS
STA. 157+97.76 TO STA. 159+05.00



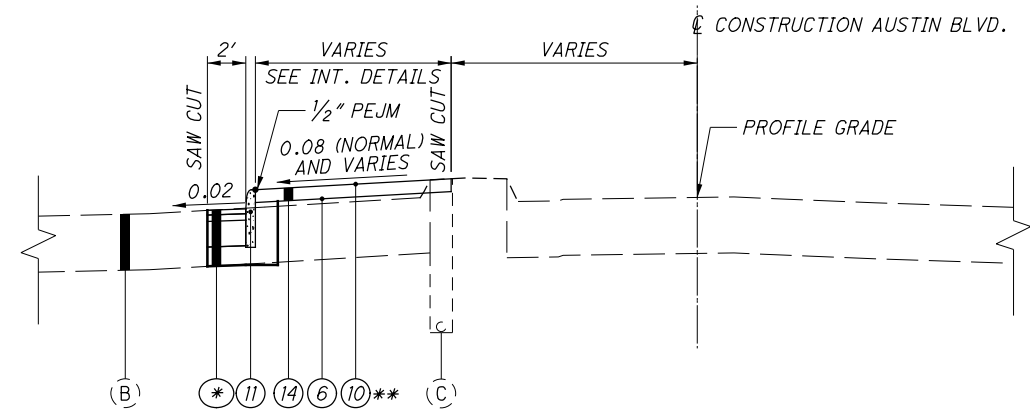
AUSTIN BLVD. CONCRETE WIDENING SECTION
STA. 157+97.76, LT. TO STA. 159+05.00, LT.

- B 66.00' STA. 159+05.00 TO STA. 159+25.00
VARIES 66.00' TO 64.00'
STA. 159+25.00 TO STA. 160+15.00
64.00' STA. 160+15.00 TO STA. 166+08.84
- C 24.00' STA. 159+05.00 TO STA. 159+15.00
VARIES 7.12' TO 14.00'
STA. 159+15.00 TO STA. 160+21.84
14.00' STA. 160+21.84 TO STA. 166+08.84
- D 42.00' STA. 159+05.00 TO STA. 159+15.00
VARIES 58.88' TO 50.00'
STA. 159+15.00 TO STA. 166+08.84

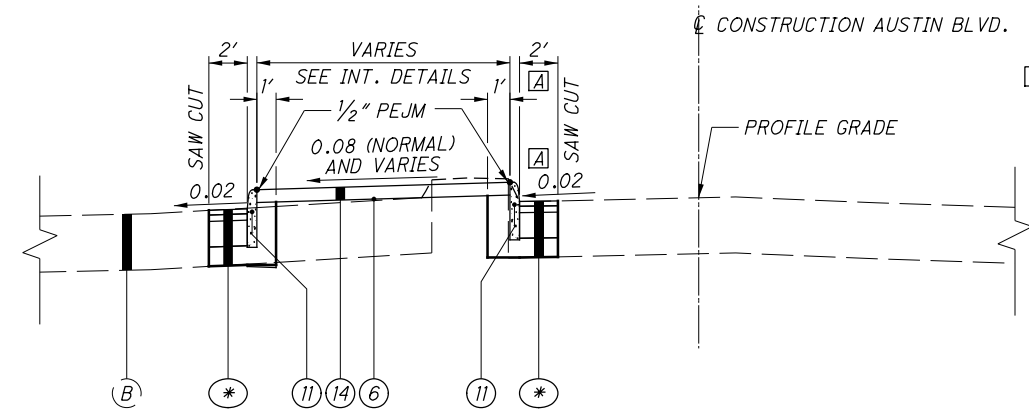


AUSTIN BLVD. ASPHALT WIDENING SECTION
STA. 159+05.00, LT. TO STA. 166+08.84, LT.
* STA. 161+00.00 TO STA. 164+00.00

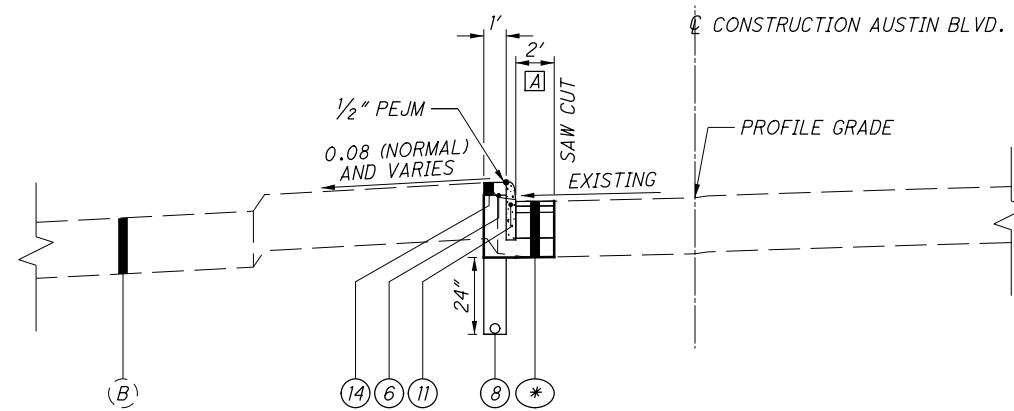
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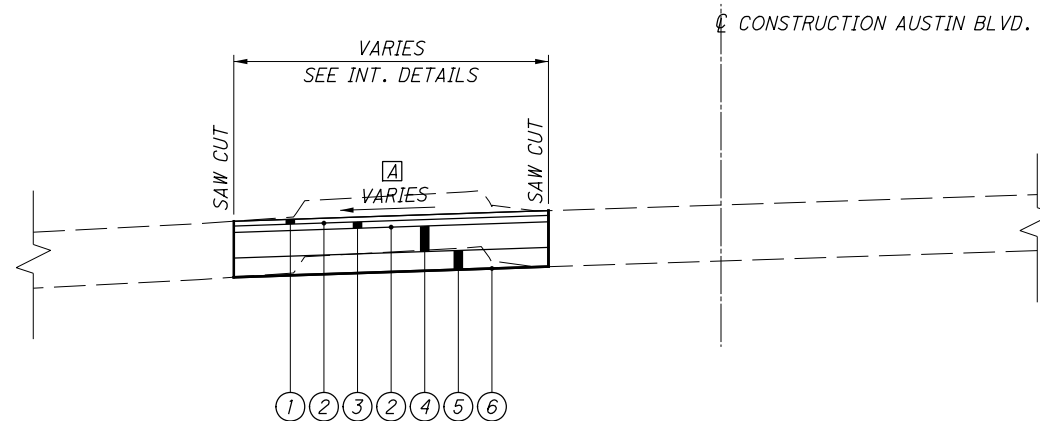
AUSTIN BLVD. MEDIAN SECTION
STA. 169+29.98, LT. TO STA. 172+54.08, LT.
STA. 173+77.41, LT. TO STA. 175+05.00, LT.



AUSTIN BLVD. MEDIAN SECTION
STA. 172+54.08, LT. TO STA. 173+00.21, LT.
STA. 172+82.83, LT. TO STA. 172+87.37, LT.
STA. 174+70.70, LT. TO STA. 174+82.88, LT.



AUSTIN BLVD. MEDIAN SECTION
STA. 172+87.37, LT. TO STA. 173+91.35, LT.
STA. 174+82.88, LT. TO STA. 175+09.62, LT.



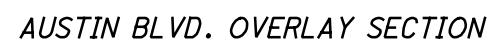
AUSTIN BLVD. FULL DEPTH ASPHALT SECTION
STA. 172+25.00, LT. TO STA. 172+82.83, LT.
STA. 173+00.21, LT. TO STA. 173+02.21, LT.
STA. 174+63.00, LT. TO STA. 174+70.70, LT.

[A] VARIES - SEE INTERSECTION DETAILS

[A] VARIES - SEE INTERSECTION DETAILS

[A] VARIES - SEE INTERSECTION DETAILS

* SEE AUSTIN BLVD. PAVEMENT COMPOSITION
** STA. 169+29.98, LT. TO STA. 169+70.86, LT. AND STA. 173+77.41, LT. TO STA. 175+05.00, LT.



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UTILITIES

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

ELECTRIC:

DAYTON POWER & LIGHT CO.
1900 DRYDEN RD.
DAYTON, OH 45439

BILL WARD
WILLIAM.WARD@AES.COM
PHONE: 937.554.9063

TELECOMMUNICATIONS:

AT&T OHIO (FORMERLY SBC)
3233 WOODMAN DR.
DAYTON, OH 45420

HOWARD LAUDERMILK
HL1596@ATT.COM
PHONE: 937.296.3588

CINCINNATI BELL (AERIAL)
221 EAST FOURTH ST.
BUILDING 121-900
CINCINNATI, OH 45201

MIKE WILLIAMS, ENG.
MIKE.WILLIAMS@CINBELL.COM
PHONE: 513.565.6024

CINCINNATI BELL (UNDERGROUND)
221 EAST FOURTH ST.
BUILDING 121-900
CINCINNATI, OH 45201

MARK CONNER
MARK.CONNER@CINBELL.COM
PHONE: 513.565.7043

MCI WORLD COM/VERIZON
120 RAVINE ST.
AKRON, OH 44303

ALLAN GUEST
ALLEN.GUEST@VERIZON.COM
PHONE: 330.253.8267

CHARTER/SPECTRUM
3691 TURNER RD.
DAYTON, OH 44303

JACOB HUNDESHALL
JACOB.HUNDESHALL@CHARTER.COM
PHONE: 937.396.8372

CENTURYLINK
9490 MERIDIAN WAY
WEST CHAESTER, OH 45069

TERRY SPAW
TERRY.SPAW@CENTURYLINK.COM
PHONE: 513.644.8933

WINDSTREAM
2165 STATE ROUTE 133 SOUTH
BLANCHESTER, OH 45107

LEON TAYLOR
LEON.TAYLOR@WINDSTREAM.COM
PHONE: 937.725.5358

STORM SEWER AND TRAFFIC SIGNAL:
MONTGOMERY COUNTY ENGINEERS OFFICE
451 WEST THIRD STREET
P.O. BOX 972
DAYTON, OHIO 45422-1260

GARY SHOUP
SHOUPG@MCOHIO.ORG
PHONE: 937.2256351

EXISTING PLANS

EXISTING PLANS ENTITLED MOT-75-0.75 (WAR) MAY BE INSPECTED IN THE ODOT DISTRICT 7 OFFICE IN SIDNEY.

GAS:

VECTREN ENERGY DELIVERY
6500 CLYO ROAD
CENTERVILLE, OH 45459

GREGORY FISHMAN
GFISHMAN@VECTREN.COM
PHONE: 937.312.2521

DUKE ENERGY GAS

139 EAST 4TH ST., ROOM 460A
CINCINNATI, OH 45202

RICHARD HACKER
RICHARD.HACKER@DUKE-ENERGY.COM
PHONE: 513.287.1232

B.P. PIPELINES, INC.
30 SOUTH WACKER DRIVE
SUITE 900
CHICAGO, IL 60606

KEITH BOYLE
KEITH.BOYLE@BP.COM
PHONE: 312.809.4708

KIM MILLER
513.646.6187

SANITARY AND WATER:

MONTGOMERY CO. ENVIRONMENTAL SERVICES
1850 SPAULDING RD.
DAYTON, OH 45432-3732

EDWARD SCHLAACK
SCHLAACKE@MCOHIO.ORG
PHONE: 937.781.2632

WATER:

CITY OF MIAMISBURG
10 N. FIRST ST.
MIAMISBURG, OH 45342

ROBERT STANLEY, CE
ENGINEERING@CITYOFMIAMISBURG.ORG
PHONE: 937.847.6456

ODOT TRAFFIC SIGNAL:

ODOT DISTRICT 7 TRAFFIC
1001 SAINT MARYS AVENUE
SIDNEY, OHIO 45365

JUSTIN YOH
JUSTIN.YOH@DOT.OHIO.GOV
PHONE: 937.497.6897

IRRIGATION AND LIGHTING:

MIAMI TOWNSHIP PUBLIC WORKS
10891 WOOD ROAD
MIAMISBURG, OHIO 45342

DANIEL MAYBERRY
DMAJBERRY@MIAMITOWNSHIP.COM
PHONE: 937.866.4661

AVIATION:

CITY OF DAYTON DEPT. OF AVIATION
3600 TERMINAL DRIVE, SUITE 300
VANDALIA, OHIO 45377

DAN FRANCE
DFRANCE@FLYDAYTON.COM
PHONE: 937.454.8231

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 2 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: ODOT VRS
MONUMENT TYPE: IRON PIN WITH CAP

VERTICAL POSITIONING
ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: GEOID03

HORIZONTAL POSITIONING
REFERENCE FRAME: NAD83(1995)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC TWO PARALLEL
COORDINATE SYSTEM: OHIO STATE PLANE , SOUTH ZONE
COMBINED SCALE FACTOR: 0.9999033133
PROJECT ADJUSTMENT FACTOR: 1.000096696
ORIGIN OF COORDINATE SYSTEM: 0, 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.

CONSTRUCT 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.

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.

CONTRACTION JOINTS IN CONCRETE PAVEMENT OR BASE WIDENING

WHERE NEW CONCRETE IS PLACED ADJACENT TO EXISTING CONCRETE, PROVIDE CONTRACTION JOINTS IN THE NEW CONCRETE TO FORM CONTINUOUS JOINTS WITH THOSE IN THE EXISTING CONCRETE.

THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN THE NEW CONCRETE ARE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2, IF NECESSARY, ADDITIONAL JOINTS MAY BE PROVIDED IN THE NEW CONCRETE AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 966 FT. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND THE ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO FILE A NEW FAA FORM 7460-1, ADVISING THE FAA THAT AERONAUTICAL STUDY NO. 2018-AGL-16774-OE IS BEING RESUBMITTED AND THAT AN ALTERATION TO THE ORIGINAL SUBMISSION IS REQUESTED.

NOTIFY THE ODOT OFFICE OF AVIATION WHEN RESUBMITTING FAA FORM 7460-1. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/OPERATIONS/AVIATION/PAGES/FAAANDSTATENOTIFICATIONREQUIREMENTS.ASPX

EXPRESS PROCESSING CENTER
THE FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
AIR TRAFFIC AIRSPACE BRANCH ASW-520
2601 MEACHAM BLVD.
FORT WORTH, TX 76137-4298

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
614-387-2358

UPON COMPLETION OF THE INSTALLATION OF MAST ARM ALONG SR 741 STA. 34+63, 62.2 RT. THE CONTRACTOR IS TO NOTIFY THE PROJECT ENGINEER, TO EMAIL JONATHAN.KOESTER@DOT.OHIO.GOV THAT THE NEW MAST ARM HAS BEEN INSTALLED.

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

- SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.
- AS DIRECTED BY THE ENGINEER, EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO 204.05.

IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.

- COMPACT THE SUBGRADE ACCORDING TO 204.03.

- APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE SUBGRADE. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.

PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO 204.06.

- EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.

USE ITEM 204, GRANULAR MATERIAL, TYPE B, WITH NO GEOTEXTILE OR GEOGRID, IN THE AREA OF UNDERDRAINS. TYPE B SHALL BE UTILIZED FOR THE OUTSIDE 4' WIDTH OF THE GRANULAR MATERIAL.

- PROOF ROLL THE STABILIZED AREAS ACCORDING TO 204.06 TO VERIFY STABILITY.
- FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204 EXCAVATION OF SUBGRADE.

THE FOLLOWING QUANTITY IS CARRIED TO THE GENERAL SUMMARY:
ITEM 204 - GRANULAR MATERIAL, TYPE B 45 CY

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ITEM 451 – REINFORCED CONCRETE PAVEMENT, MISC.: 4” ENHANCED CONCRETE PAVEMENT
IN ADDITION TO THE REQUIREMENTS OF THE DEPARTMENT’S CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONCRETE MEDIANS SHALL BE AS FOLLOWS:

CONCRETE MEDIAN FINISH: BOMANITE CORPORATION – MEDIUM ASHLAR SLATE PATTERN WITH SIZES TO RANGE FROM 8” X 9” TO 18” X 20” AND 8” X 9” AND 21” X 32”, INCRETE SYSTEMS – RANDOM SIDEWALK SLATE PATTERN. L. M. SCOFIELD COMPANY – FRACTURED RANDOM INTERLOCKING PATTERNS 700A, 700B, 700C, OR EQUAL AS APPROVED BY THE ENGINEER. COLOR MUST MATCH FEDERAL STANDARD 595B: #10115.

BOMANITE CORPORATION
7862 WINDING WAY, #2649
FAIR OAKS, CA 95628
PHONE: (303) 369-1115

INCRETE SYSTEMS
1611 GUNN HIGHWAY
ODESSA, FL 33556
PHONE: (813) 886-8811

L. M. SCHOFIELD COMPANY
1652 E. MAIN ST., SUITE 200
ST. CHARLES, IL 60174
PHONE: (630) 377-5959

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND/OR REMOVALS
THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF PIPES.

ITEM 301 ASPHALT CONCRETE BASE, PG64-22 6 CU. YDS.

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 8 INCHES AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

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

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

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

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

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

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

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

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

UNRECORDED STORMWATER DRAINAGE
FURNISH A CONTINUANCE FOR ALL UNRECORDED STORM WATER DRAINAGE, SUCH AS ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK. FURNISH EITHER AN OPEN CONTINUANCE OR AN UNOBSTRUCTED CONTINUANCE BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEEDED CONDUIT TO REPLACE OR EXTEND AN EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER. ALL SUCH CONTINUANCE REQUIRES A RIGHT OF WAY USE PERMIT.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.33, 707.41 NONPERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

611, 6” CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	50 FT.
611, 6” CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	50 FT.
611, 6” CONDUIT, TYPE E, FOR DRAINAGE CONNECTION	50 FT.
611, 6” CONDUIT, TYPE F, FOR DRAINAGE CONNECTION	50 FT.

EXISTING UNDERDRAINS
PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDER-DRAINS THAT OUTLET TO A SLOPE.

UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

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

601, TIED CONCRETE BLOCK MAT, TYPE 1	3 SQ. YD.
611, 6” CONDUIT, TYPE F	50 FT.
611, PRECAST REINFORCED CONCRETE OUTLET	2 EACH
605, 6” UNCLASSIFIED PIPE UNDERDRAINS	50 FT.

MULTI-USE TRAIL PROTECTION
THE CONTRACTOR SHALL NOTIFY THE AUSTIN JOINT ECONOMIC DEVELOPMENT DISTRICT (JEDD) AT LEAST TWO WEEKS PRIOR TO IMPLEMENTATION OF THE TRAIL DETOUR.

THE CONTRACTOR SHALL PROVIDE THE AUSTIN JEDD AN OPPORTUNITY TO INSPECT THE AFFECTED SEGMENT OF THE MULTI-USE TRAIL PRIOR TO COMPLETION OF THE PROJECT. ANY DAMAGES OR DEFICIENCIES SHALL BE ADDRESSED BY THE CONTRACTOR TO THE SATISFICATION OF THE AUSTIN JEDD.

CONTACTS:
STEVE STANLEY: SSTANLEY@MCTID.ORG
CRYSTAL CORBIN: CCORBIN@MCTID.ORG

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

659, SOIL ANALYSIS TEST	2 EACH
659, TOPSOIL	707 CU. YD.
659, SEEDING AND MULCHING	6366 SQ. YD.
659, REPAIR SEEDING AND MULCHING	319 SQ. YD
659, INTER-SEEDING	319 SQ. YD.
659, COMMERCIAL FERTILIZER	0.89 TON
659, LIME	1.32 ACRES
659, WATER	37 M. GAL.

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

STA. 165+00 – 16’ X 6’ CULVERT PROTECTION
BETWEEN THE PROPOSED SAW CUT LINE AND TWO FEET BEHIND THE PROPOSED BACK OF CURB, EXPOSE THE EXISTING 16’ X 6’ CULVERT. REPAIR ANY DAMAGED WATERPROOFING.

TO AVOID ANY DAMAGE TO THE CULVERT WATERPROOFING, AGGREGATE SHALL NOT BE PLACED DIRECTLY ON THE THE CULVERT’S WATERPROOFING. A MINIMUM OF 6” OF ITEM 301, ASPHALT CONCRETE BASE, PG 64-22 SHALL BE PLACED DIRECTLY ABOVE THE EXPOSED CULVERT. EXTEND THE ITEM 301 BASE UP TO THE BOTTOM OF THE ITEM 442 INTERMEDIATE COURSE.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

ITEM 301 – ASPHALT CONCRETE BASE, PG 64-22	10 CY
ITEM 512 – TYPE A WATERPROOFING	60 SY

POST CONSTRUCTION STORM WATER TREATMENT
THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP’S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

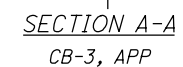
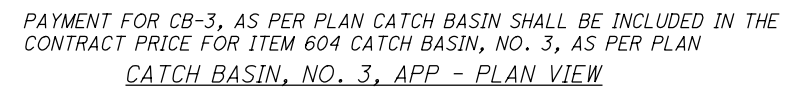
VEGETATED BIOFILTER
THIS PLAN UTILIZES A VEGETATED BIOFILTER FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AS SHOWN IN THE PLANS TO ANY DISTURBED AREA ON THE SHOULDER AND FORESLOPE DRAINING TO A VEGETATED BIOFILTER. THE DITCH FOR EACH VEGETATED BIOFILTER SHALL BE TRAPEZOIDAL, AS SHOWN IN THE PLAN CROSS SECTIONS. PROVIDE ITEM 670 AS SHOWN IN PLANS.

PRIOR TO ANY ACTIVITY NEAR THE PIPELINE RIGHT-OF-WAY, BP'S DAMAGE PREVENTION SPECIALIST, KIM MILLER, MUST BE CONTACTED TO LOCATED AND FLAG THE PIPELINE. KIM OR HIS REPRESENTATIVE MUST BE ON SITE AT ALL TIMES WHEN WORKING IN PROXIMITY TO THE PIPELINE. KIM CAN BE REACHED AT (513) 646-6187.

ANY EXCAVATION WITHIN 2 FT. (24") OF THE PIPELINE SHALL BE DONE BY HAND, OR OTHER NON-MECHANICAL MEANS, AS APPROVED BY BP PERSONNEL.

IF THE BP DAMAGE PREVENTION SPECIALIST, IN HIS/HER SOLE DISCRETION, DETERMINES THAT THE CONSTRUCTION ACTIVITIES COULD RESULT IN DAMAGE TO THE PIPELINE, THE DAMAGE PREVENTION SPECIALIST WILL NOTIFY ODOT, THEIR OPERATOR OR CONTRACTOR. ODOT HEREIN ACKNOWLEDGES THAT THE BP DAMAGE PREVENTION SPECIALIST SHALL HAVE FULL AUTHORITY TO STOP ANY EXCAVATION OR CONSTRUCTION RELATED ACTIVITIES IN CLOSE PROXIMITY TO THE BP PIPELINE IF IN THE DAMAGE PREVENTION SPECIALIST'S OPINION, SUCH ACTIVITIES COULD RESULT IN DAMAGE TO THE PIPELINE.

FURTHERMORE, UNLESS OTHERWISE STIPULATED BY BP, NO EQUIPMENT WILL BE ALLOWED ON OR NEAR BP'S PIPELINE WITHOUT PRIOR WRITTEN APPROVAL FROM BP. PER RELEVANT STATE LAW, 811, THE NATIONAL ONE-CALL NUMBER, MUST BE CONTACTED, PRIOR TO COMMENCEMENT OF ANY APPROVED EXCAVATION RELATED ACTIVITIES.



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ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF 2 LANES OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ALONG ALL ROADS BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, ITEM 615 ROADS FOR MAINTAINING TRAFFIC AND TEMPORARY SURFACES USING ITEMS 410 AND 614.

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

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

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUB-BASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 3 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACK-FILLED AT THE DIRECTION OF THE ENGINEER.

DUST CONTROL

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

ITEM 616, WATER 10 M. GAL

EARTHWORK FOR MAINTAINING TRAFFIC

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

EXCAVATION FOR MAINTAINING TRAFFIC 50 CU. YD.
EMBANKMENT FOR MAINTAINING TRAFFIC 50 CU. YD.

WHEN UNDERCUTS ARE NECESSARY FOR MAINLINE PAVEMENT OR EMBANKMENT CONSTRUCTION, EVALUATE THE NEED FOR TEMPORARY ROAD UNDERCUTS IF WITHIN A CLOSE PROXIMITY TO THE MAINLINE UNDERCUTS. A GEOTECHNICAL EVALUATION SHOULD BE CONSIDERED TO DETERMINE IF THE EXISTING SOIL CONDITIONS ARE ADEQUATE TO SUPPORT THE TEMPORARY ROAD. ADDITIONAL SOIL BORINGS ALONG THE TEMPORARY ROAD ARE NOT NORMALLY REQUIRED.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)
THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS WEB PAGE FOR ROADWAY STANDARDS 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 FOR MAINTAINING TRAFFIC, AS PER PLAN
PAVEMENT FOR MAINTAINING TRAFFIC SHALL CONSIST OF 2" OF ITEM 448, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22, AND 10" OF ITEM 301 OR ITEM 302, ASPHALT CONCRETE.

PAYMENT FOR THE FOLLOWING QUANTITY OF WORK ZONE PAVEMENT IS INCLUDED IN THE GENERAL SUMMARY UNDER ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, AS PER PLAN.

ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, AS PER PLAN - 376 SQ. YD.

ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN
WORK ZONE RAISED PAVEMENT MARKERS, AS PER PLAN, AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614 OR C&MS 621 AS SPECIFIED HEREIN.

RAISED PAVEMENT MARKERS IN USE DURING THE SNOW-PLOWING SEASON SHALL CONFORM TO 621.

RAISED PAVEMENT MARKERS IN USE DURING THE NON-SNOW-PLOW SEASON SHALL CONFORM TO EITHER 614 OR TO 621.

THE SNOW-PLOWING SEASON SHALL RUN FROM OCTOBER 15TH THROUGH APRIL 1ST .

IF PROJECT DELAYS, NOT THE FAULT OF ODOT, CAUSE THE WORK TO EXTEND INTO THE SNOW-PLOWING SEASON, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WORK ZONE RAISED PAVEMENT MARKERS (WZRPMS) CONFORMING TO C&MS 614, WITH RAISED PAVEMENT MARKERS CONFORMING TO 621, AS DETERMINED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN, INCLUDING FILLING OF ANY DEPRESSIONS CREATED IN THE PAVEMENT AS PER C&MS 621.08.

RESURFACING OF THE TRANSITION AREAS SHALL BE PERFORMED AT THE TIME THAT THE SURFACE COURSE IS BEING APPLIED TO THE ENTIRE PROJECT. PRIOR TO APPLICATION OF THE SURFACE COURSE ON THE PROJECT, THE EXISTING PAVEMENT WITHIN THE TRANSITION AREA SHALL BE REMOVED TO A DEPTH NECESSARY TO REACH THE LEVEL OF THE INTERMEDIATE COURSE OF THE PAVEMENT, AS DETERMINED BY THE ENGINEER.

THE FOLLOWING BID ITEMS SHOULD BE INCLUDED IN THE PLANS:

ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE - 585 SQ. YD.

PAYMENT FOR RESURFACING WITHIN THE TRANSITION AREA SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEMS FOR THE WORK REQUIRED, AS PROVIDED FOR IN THE PLANS.

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME TABLE		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMP & ROAD CLOSURES	>= 2 WEEKS >12 HOURS & < 2 WEEKS <= 12 HOURS	21 CALENDAR DAYS PRIOR TO CLOSURE 14 CALENDAR DAYS PRIOR TO CLOSURE 4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE 5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES MULTI-USE TRAIL DETOUR	>1 DAY	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION 14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

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.

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND CONCRETE PERMANENT BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS AND ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

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.

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

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

ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.

LANE CLOSURE RESTRICTIONS

THE LANE CLOSURE TIMES ON AUSTIN BLVD AND SR-741 SHALL BE AS FOLLOWS: ONE LANE MAY BE CLOSED FROM 7:00 PM TO 6:00 AM EACH NIGHT, BEGINNING SUNDAY AT 7:00 P.M. THROUGH FRIDAY AT 6:00 A.M.

NO LANE CLOSURES ON IR-75 OR IR-75 RAMPS WILL BE PERMITTED.

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

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

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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 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 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.

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. 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 80 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.

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 800 FEET AND 650 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.)

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 PRE-CONSTRUCTION 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 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.

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

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

ASSUMING 1 SIGN FOR 1 MONTH

SEQUENCE OF CONSTRUCTION

BEFORE THE COMMENCEMENT OF EACH CONSTRUCTION PHASE, THE CONTRACTOR SHALL REVISE THE PAVEMENT MARKINGS, REMOVE CONFLICTING PAVEMENT MARKINGS AND COVER CONFLICTING SIGNS.

SIGNALS SHALL REMAIN OPERATIONAL DURING CONSTRUCTION PER THE TEMPORARY SIGNAL PLAN. EXISTING VEHICULAR VIDEO DETECTION MAY REQUIRE RECONFIGURATION FOR EACH PHASE.

PRE-CONSTRUCTION PHASE:

DETOUR THE BIKEPATH ALONG THE NORTH SIDE OF AUSTIN LANDING PER THE DETOUR NOTE. REMOVE EXISTING CURB AND SIDEWALK FROM APPROX. STATION 158+43 LEFT TO APPROX. STATION 161+35 LEFT. CONSTRUCT TEMPORARY PAVEMENT AS SHOWN IN THE PLANS TO MAINTAIN RIGHT TURN MOVEMENT DURING PHASE 1.

AT THE RAMP J SIGNAL, ERECT WOOD POLES AND TEMPORARY SIGNAL HEADS, CONSTRUCT NEW SUPPORT FOUNDATION, AND BORE NEW CONDUIT RUNS. SEE THE TEMPORARY TRAFFIC SIGNAL PLAN SHEET. RELOCATE EXISTING SIGNAL SUPPORT TO NEW FOUNDATION.

PHASE 1:

PLACE WORK ZONE PAVEMENT MARKING AS SHOWN IN THIS PHASE. SHIFT WESTBOUND AUSTIN PIKE TRAFFIC SOUTHERLY CLOSER TO THE MEDIAN AS SHOWN IN THE PLANS. MAINTAIN THE EXISTING NUMBER OF LANES.

MAINTAIN 1 FT BUFFER FROM EXISTING MEDIAN CURB, 10 FT LANE WIDTHS, 1 FT BUFFER TO PORTABLE BARRIER AND 1 FT BUFFER BETWEEN PORTABLE BARRIER TO WORK ZONE.

BETWEEN STA. 172+00 AND 176+00, SHIFT THE TWO MOST NORTHERN WESTBOUND AUSTIN LANES TO THE NORTH TO PERFORM THE MEDIAN WORK AS SHOWN IN THE PLANS. MAINTAIN 1 FT BUFFER FROM EXISTING CURB, TWO 10 FT LANES, 1 FT BUFFER TO PORTABLE BARRIER AND 1 FT BUFFER BETWEEN PORTABLE BARRIER AND WORK ZONE.

BETWEEN STA. 172+00 AND 176+00, SHIFT THE TWO EASTBOUND CROSSOVER AUSTIN LANES HEADING TO NORTHBOUND SR-741 TO THE RIGHT (MAINTAINING SOUTHERN EDGE LINE) TO PERFORM THE MEDIAN WORK AS SHOWN IN THE PLANS. MAINTAIN 1 FT BUFFER FROM EXISTING CURB, TWO 10 FT LANES, 1 FT BUFFER TO PORTABLE BARRIER, AND 1 FT BUFFER BETWEEN PORTABLE BARRIER AND WORK ZONE.

SHIFT SOUTHBOUND AUSTIN LANDING BLVD TRAFFIC TO THE EAST. MAINTAIN 1 FT BUFFER FROM THE WORK ZONE TO THE PORTABLE BARRIER, 1 FT BUFFER FROM THE BARRIER TO THE EDGE LINE, AND TWO 11 FT RIGHT TURN LANES.

SHIFT RAMP J TRAFFIC TO THE LEFT MAINTAINING TWO 10' LANES, 1 FT BUFFER TO PORTABLE BARRIER, AND 1 FT BUFFER BETWEEN PORTABLE BARRIER AND WORK ZONE.

UTILIZE TEMPORARY PAVEMENT CONSTRUCTED IN THE PRE-CONSTRUCTION PHASE TO MAINTAIN WESTBOUND AUSTIN RIGHT TURN MOVEMENT TO RAMP J ENTRANCE RAMP.

UTILIZE TEMPORARY SIGNAL AT RAMP J INTERSECTION CONSTRUCTED IN THE PRE-CONSTRUCTION PHASE.

CONSTRUCT WORK AS SHOWN IN THE AREAS SHOWN IN THE PLANS FROM STATION 158+00 TO STATION 159+15, FROM STATION 162+44 TO STATION 166+10 INCLUDING PROPOSED STORM, AND FROM STATION 172+25 TO STATION 173+93 INCLUDING PROPOSED STORM TO THE TOP OF THE INTERMEDIATE COURSE. CONSTRUCT PROPOSED SIGNAL SUPPORT AND HEADS. CONSTRUCT PROPOSED SIGNS AND COVER WHERE SHOWN IN THE PLANS. CONSTRUCT THE BIKE PATH WITHIN THE LIMTS AS SHOWN IN THE PLANS.

PHASE 1A:

BETWEEN STA. 172+00 AND 176+00, SHIFT TO THE LEFT THE TWO EASTBOUND CROSSOVER AUSTIN LANES HEADING TO

SEQUENCE OF CONSTRUCTION (CONTINUED)

PHASE 1A: (CONTINUED)

TO NORTHBOUND SR-741, TO PERFORM THE MEDIAN WORK AS SHOWN IN THE PLANS. MAINTAIN 1 FT BUFFER FROM THE NEWLY CONSTRUCTED CURB, TWO 10 FT LANES, 1 FT BUFFER TO PORTABLE BARRIER, AND 1 FT BUFFER BETWEEN PORTABLE BARRIER AND WORK ZONE.

CONSTRUCT THE PAVEMENT AND MEDIAN REVISIONS TO THE TOP OF THE INTERMEDIATE COURSE AS SHOWN IN THE PLANS INCLUDING PROPOSED STORM.

CONTINUE TO UTILIZE TEMPORARY SIGNAL AT RAMP J INTERSECTION CONSTRUCTED IN THE PRE-CONSTRUCTION PHASE.

PHASE 2:

REVISE WESTBOUND AUSTIN PIKE TRAFFIC PATTERN AS SHOWN IN THE PLANS. MAINTAIN THE EXISTING NUMBER OF LANES. MAINTAIN 1 FT BUFFER FROM EXISTING AND NEWLY CONSTRUCTED MEDIAN CURB, 10 FT LANES, 1 FT BUFFER TO PORTABLE BARRIER, AND 1 FT BUFFER BETWEEN PORTABLE BARRIER AND WORK ZONE.

BETWEEN STA. 169+50 AND 175+00, SHIFT TO THE RIGHT THE TWO EASTBOUND CROSSOVER AUSTIN LANES HEADING TO NORTHBOUND SR-741, TO THE RIGHT, TO PERFORM THE MEDIAN WORK AS SHOWN IN THE PLANS. MAINTAIN 1 FT BUFFER FROM THE WORK ZONE TO THE PORTABLE BARRIER, AND 1 FT BUFFER FROM THE BARRIER TO THE EDGE LINE. MAINTAIN MINIMUM OF TWO 10 FT LANES.

MAINTAIN RAMP J LANE CONFIGURATION AS IN PHASE 1. CONSTRUCT THE PROPOSED RAMP J WORK AND AUSTIN PIKE WIDENING UP TO STATION 142+44 INCLUDING PROPOSED STORM. CONSTRUCT THE PROPOSED AUSTIN BLVD WORK BETWEEN STATION 168+50 AND STATION 173+00 TO THE TOP OF THE INTERMEDIATE COURSE AS SHOWN IN THE PLANS. CONSTRUCT PROPOSED SIGNS SHOWN IN THE PLANS. COVER SIGNS WHERE NOTED. CONSTRUCT THE REMAINING PROPOSED BIKE PATH AS SHOWN IN THE PLANS.

PHASE 2A:

BETWEEN STA. 172+00 AND 175+00, SHIFT TO THE LEFT THE TWO EASTBOUND CROSSOVER AUSTIN LANES HEADING TO NORTHBOUND SR-741, TO PERFORM THE MEDIAN WORK AS SHOWN IN THE PLANS. MAINTAIN 1 FT BUFFER FROM THE WORK ZONE TO THE PORTABLE BARRIER, 1 FT BUFFER FROM THE BARRIER TO THE EDGE LINE, AND TWO-10 FT LANES.

CONSTRUCT THE PROPOSED PAVEMENT AND MEDIAN REVISIONS TO THE TOP OF THE INTERMEDIATE COURSE AS SHOWN IN THE PLANS BETWEEN STATION 173+75 AND STATION 175+05.

PHASE 3 NOT SHOWN:

TERMINATE THE BIKEPATH DETOUR ALONG THE NORTH SIDE OF AUSTIN LANDING AND OPEN THE BIKWAY. MILL 1.5" OF THE SURFACE COURSE TO THE LIMITS SHOWN IN THE ROADWAY PLANS. ADD SURFACE COURSE, PLACE WORK ZONE PAVEMENT MARKING AND UNCOVER PROPOSED SIGNING.

PEDESTRIAN AND BIKE DETOUR

ADVANCED SIGNING PER MT-110.10 SHALL BE INSTALLED:

1) ALONG THE SIDEWALK ON THE WEST SIDE OF AUSTIN LANDING BLVD. BETWEEN AUSTIN BLVD. AND INNOVATION WAY

2) ALONG THE BIKEPATH ON THE NORTH SIDE OF AUSTIN BLVD. BETWEEN THE AUSTIN LANDING INTERSECTION S.R. 741 INTERSECTION

3) ALONG THE BIKEPATH ON THE NORTH SIDE OF AUSTIN BLVD. WEST OF THE AUSTIN WEST BLVD. INTERSECTION

CLOSE THE BIKEPATH ALONG THE NORTH SIDE OF AUSTIN BLVD. BETWEEN AUSTIN LANDING AND I-75 NORTHBOUND RAMPS.

EASTBOUND BIKE TRAFFIC SHALL BE DIRECTED TO CROSS AUSTIN BOULEVARD AT THE EASTERLY CROSSWALK OF THE SIGNALIZED INTERSECTION WITH AUSTIN WEST BLVD. TO THE SIDEWALK ALONG THE SOUTH SIDE OF AUSTIN BOULEVARD. BIKE TRAFFIC SHALL TRAVEL EAST ALONG THE AUSTIN BOULEVARD SOUTH SIDEWALK TO THE INTERSECTION WITH AUSTIN LANDING. THE BIKE TRAFFIC SHALL UTILIZE THE EXISTING CROSSWALKS TO TRAVEL NORTH ACROSS AUSTIN BOULEVARD TO THE EXISTING BIKE PATH.

WESTBOUND BIKE TRAFFIC SHALL USE THE SAME SIDEWALK AND CROSSINGS. THE DETOUR SHALL BE IN PLACE FOR MOT PHASE 1, 1A, 2, AND 2A.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

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	SHEET NO.	STATION TO STATION					MAINTENANCE OF TRAFFIC SUBSUMMARY																		MOT - 75 - 0.76		11 106	
							614	614	614	614			614	614	614	614	614	614	622							CALCULATED GKB CHECKED MAG		
							INCREASED BARRIER DELINEATION	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER			WORK ZONE LANE LINE, CLASS I	WORK ZONE EDGE LINE, CLASS I	WORK ZONE CHANNELIZING LINE, CLASS I	WORK ZONE CHANNELIZING LINE, CLASS I, 740.06, TYPE I	WORK ZONE DOTTED LINE, CLASS I		WORK ZONE STOP LINE, CLASS I	WORK ZONE ARROW, CLASS I		PORTABLE BARRIER, 32"						
							FT	EACH	EACH	EACH			MILE	MILE	FT	FT	FT		FT	EACH		FT						
		PHASE 1																96										
	14	157+10.00	RT	TO	157+80.00	LT																						
	14	157+87.50	LT		161+71.00	LT							0.073															
	14	158+00.00	LT		165+55.00	LT							0.143															
	14	158+29.00	LT		165+60.55	LT						0.139																
	14	161+71.00	LT		165+55.00	LT									384													
	14	158+02.00	LT		159+92.00	LT	150	4	2													150						
	14	165+60.55	LT		166+45.00	LT											153											
	14	162+00.00	LT																	1								
	14	163+00.00	LT																	1								
	14	164+00.00	LT																	1								
	14	165+00.00	LT																	1								
	14	158+20.00	LT		160+05.00	LT	200	5	1													200						
	14	158+15.40	LT		159+85.00	LT							0.043															
	14	158+41.20	LT		165+55.30	LT							0.140															
	14	162+16.70	LT		165+46.70	LT	310	7														310						
	14	159+85.00	LT		161+71.00	LT							0.035															
	14	10+45.00	LT		13+24.00	LT							0.066															
	14	10+47.00	LT		12+47.00	LT	230	6	1													230						
	14	11+29.00	LT		12+76.00	LT									151													
	14	11+29.00	LT		13+66.00	LT								245														
	14	11+29.00	LT															11										
	14	11+38.60	LT																	2								
	14	12+27.80	LT																	2								
	14	140+59.30	LT		144+12.80	LT									354													
	14	140+61.50	LT		142+62.40	LT							0.038															
	14	140+49.60	RT		141+75.60	RT							0.024															
	14	140+53.20	RT		141+53.20	RT	80	3	1													80						
	14-15	167+60.80	LT		170+60.00	LT							0.057															
	14-15	167+62.00	LT		169+30.00	LT								168														
	14-15	167+63.00	LT		173+21.00	LT						0.106	0.106															
	14-15	169+30.00	LT		172+53.50	LT											326											
	14-15	171+75.00	LT		175+18.00	LT							0.065															
	14-15	172+15.00	LT		176+01.00	LT							0.073															
	14-15	172+52.00	LT		176+00.00	LT			18					350		150												
	14-15	176+00.00	LT		177+50.00	LT			8																			
	14-15	172+15.00	LT		174+82.60	LT	250	6	1													250						
	14-15	172+13.00	LT		174+18.60	LT	210	5														210						
	14-15	172+13.00	LT		175+24.00	LT							0.060															
	14-15	172+43.00	RT		172+93.00	RT								50														
	14-15	172+93.00	RT		173+98.00	LT											112											
	14-15	173+98.00	LT		175+14.00	LT								120														
	14-15	173+77.00	LT		176+82.00	LT							0.058															
	14-15	174+50.00	LT		176+82.00	LT							0.044															
	14-15	174+50.00	LT		176+82.00	LT			12					232														
	14-15	176+82.00	LT		178+24.00	LT			8							142												
TOTALS CARRIED TO GENERAL SUMMARY							1430	36	6	46			0.25	1.03	2054	292	687		11	8		1430						

MAINTENANCE OF TRAFFIC SUBSUMMARY

MOT - 75 - 0.76

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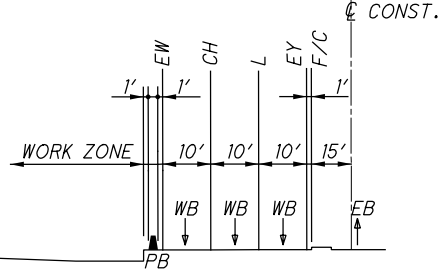
	SHEET NO.	STATION TO STATION					614		614	614			614	614	614	614		614	614		622		614			CALCULATED GKB CHECKED MAG
							INCREASED BARRIER DELINEATION	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER			WORK ZONE LANE LINE, CLASS I	WORK ZONE EDGE LINE, CLASS I	WORK ZONE CHANNELIZING LINE, CLASS I	WORK ZONE CHANNELIZING LINE, CLASS I, 740.06, TYPE I	WORK ZONE DOTTED LINE, CLASS I		WORK ZONE STOP LINE, CLASS I	WORK ZONE ARROW, CLASS I		PORTABLE BARRIER, 32"		WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I		
		PHASE 1A					FT	EACH	EACH	EACH			MILE	MILE	FT	FT	FT		FT	EACH		FT		FT		
	16	171+06.00	LT		172+13.00	LT								0.020												
	16	171+06.00	LT		172+15.00	LT								0.021												
	16	172+46.00	LT		173+06.00	LT								0.011												
	16	172+46.00	RT		172+91.00	RT									45											
	16	172+91.00	LT		173+82.00	LT											98									
	16	173+57.00	LT		175+75.00	LT								0.043												
	16	173+00.00	RT		173+61.00	LT								0.012												
	16	173+61.00	LT		176+82.00	LT								0.061												
	16	174+08.50	LT		174+50.50	LT								0.008												
	16	174+08.50	LT		177+02.00	LT								0.056												
	16	174+29.00	LT		175+27.00	LT	80	3	1													80				
	16	174+59.00	LT		176+49.00	LT	170	4	1													170				
	16	173+82.70	LT		177+02.00	LT				17					325											
	16	177+02.00	LT		178+18.00	LT				6						116										
		PHASE 2																								
	18	141+24.00	RT		143+73.00	RT								0.047												
	18	140+49.60	RT	TO	141+00.00	RT								0.010												
	18	141+26.50	RT		143+45.80	RT	200	5	1													200				
	18	157+87.50	LT		158+62.20	LT								0.014												
	18	157+98.50	LT		158+62.20	LT								0.016												
	18	158+04.00	LT		166+07.00	LT								0.165												
	18	163+67.00	LT		165+55.00	LT						0.071														
	18	165+56.00	LT		166+18.00	LT											92									
	18	165+54.00	LT		167+39.00	LT											185									
	18-19	167+40.00	LT		173+49.00	LT								0.114												
	18	167+63.00	LT		168+92.00	LT						0.024														
	18-19	167+62.00	LT		173+50.00	LT								0.111												
	18-19	167+61.00	LT		170+60.00	LT										299										
		170+60.00	LT		172+53.50	LT											194									
	19	169+50.00	LT		173+29.00	LT	360	8	1													360				
	19	168+50.00	RT		173+49.00	LT								0.095												
	19	169+87.00	RT		172+91.00	RT									304											
	19	168+89.00	RT		173+16.40	LT	410	9	2													410				
	19	172+33.00	RT		176+95.00	LT								0.089												
	19	172+42.50	LT		173+92.00	LT								0.028												
	19	172+91.00	RT																20							
	19	172+91.00	RT		174+16.50	LT											133									
	19	174+16.00	LT		176+27.00	LT						0.040														
	19	173+92.00	LT		176+27.00	LT								0.074												
	19	173+92.00	LT		176+95.00	LT								0.057												
	19	174+36.00	LT		176+95.00	LT				13					259											
	19	174+45.70	LT		176+27.00	LT								0.035												
	19	174+45.70	LT		176+95.00	LT								0.047												
	18	11+08.00	LT		13+51.50	LT									265											
	18	12+78.00	LT		13+51.50	LT									78											
	18	11+08.00	LT																36							
	18	11+29.00	LT																25							
	18	11+08.00	LT		12+37.00	LT																		198		
TOTALS CARRIED TO GENERAL SUMMARY							1220	29	6	36			0.25	1.02	1276	415	702		81			1220		198		

MAINTENANCE OF TRAFFIC SUBSUMMARY



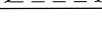

MOT - 75 - 0.76

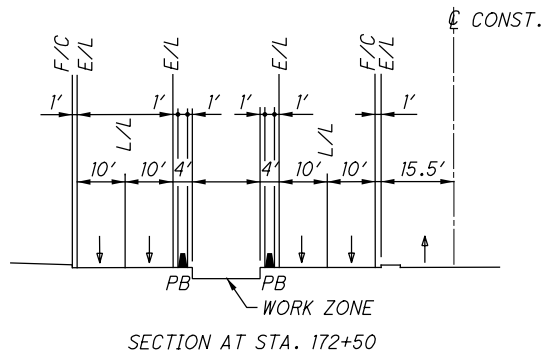
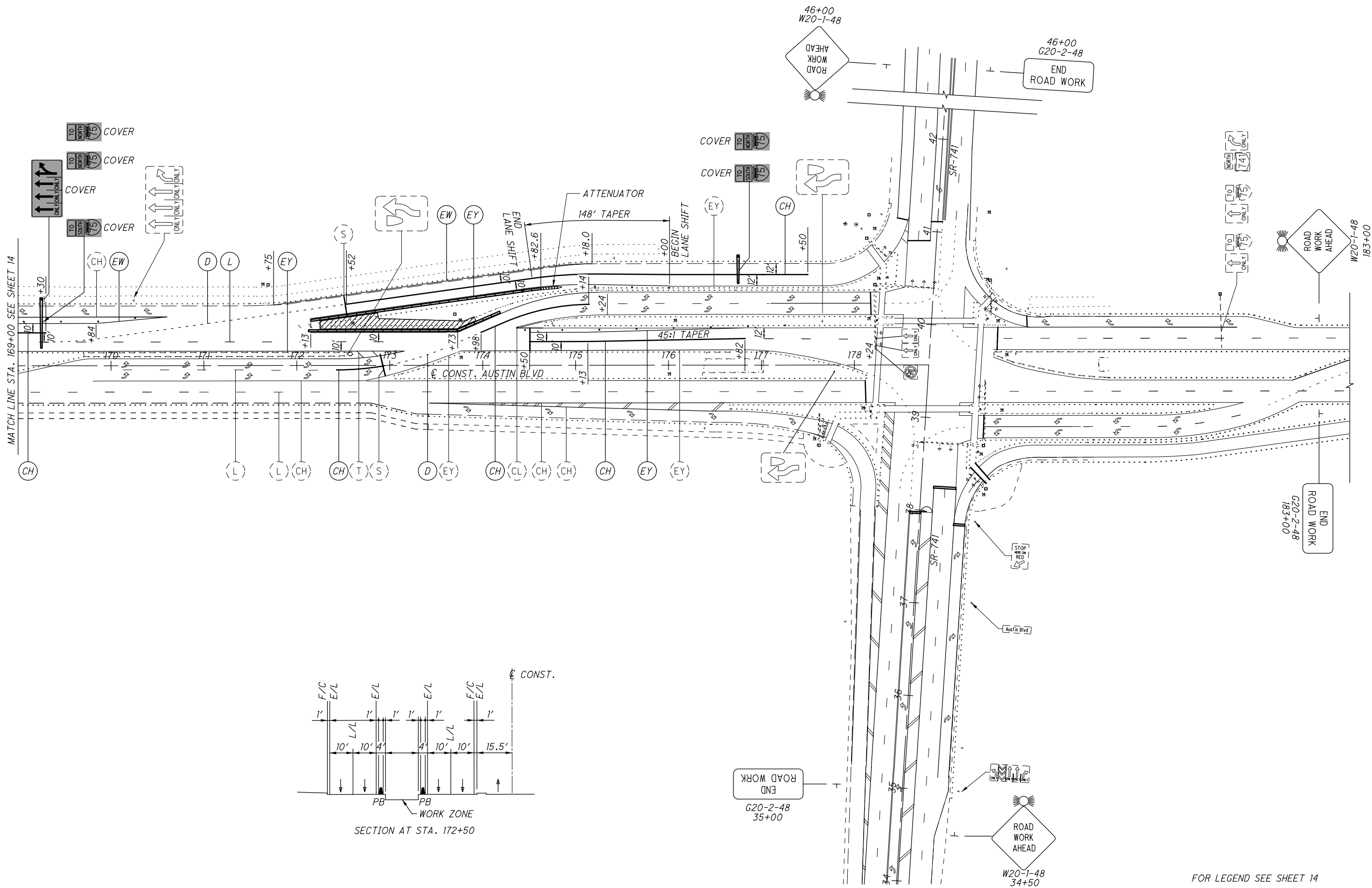
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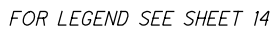
	SHEET NO.	STATION TO STATION					614		614	614			614	614	614	614		614	614		622						CALCULATED GKB CHECKED MAG
							INCREASED BARRIER DELINEATION	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER			WORK ZONE LANE LINE, CLASS I	WORK ZONE EDGE LINE, CLASS I	WORK ZONE CHANNELIZING LINE, CLASS I	WORK ZONE CHANNELIZING LINE, CLASS I, 740.06, TYPE I	WORK ZONE DOTTED LINE, CLASS I		WORK ZONE STOP LINE, CLASS I	WORK ZONE ARROW, CLASS I		PORTABLE BARRIER, 32"					
		PHASE 2A					FT	EACH	EACH	EACH			MILE	MILE	FT	FT	FT		FT	EACH		FT					MAINTENANCE OF TRAFFIC SUBSUMMARY
																	122										
	20	172+91.00	LT		174+04.00	LT							0.057														
	20	174+04.00	LT		176+95.00	LT																					
	20	171+33.80	LT		173+35.70	LT								0.038													
	20	172+47.70	LT		172+87.80	LT								0.008													
	20	172+47.70	LT		173+80.00	LT								0.025													
	20	172+89.00	LT		173+35.70	LT								0.009													
	20	173+84.00	LT		176+95.00	LT								0.059													
	20	174+30.00	LT		176+95.00	LT				14					265												
	20	173+31.00	RT		175+65.00	LT	200	5	2													200					
	20	173+00.00	LT		173+84.00	LT								0.016													
	20	173+80.00	LT		176+27.00	LT								0.047													
	20	174+30.00	LT															20									



LEGEND

	EXISTING SIGN RELOCATED
	EXISTING SIGN REMOVED
	WORK ZONE
	WORK ZONE PAVEMENT CONSTRUCTED IN PRE-CONSTRUCTION PHASE
	PORTABLE BARRIER
•	DRUMS AT 40' SPACING
	IMPACT ATTENUATOR, (UNI-DIRECTIONAL)*
	* MAINTAIN 2' MIN. OFFSET FROM PAVEMENT MARKING TO NEAR FACE OF ATTENUATOR.





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EXISTING
R9-3-18x18
Sn1, Sn4, Sn5



PROPOSED
R9-3-18
Sn14, Sn15



RELOCATED
R10-3b(R)-9x12
Sn12



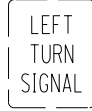
RELOCATED
R10-3b(L)-9x12
Sn13



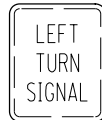
RELOCATED
M4-5-24x12
M1-5-3-30x24
M6-1-21x15
Sn11



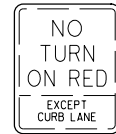
RELOCATED
R9-3-18x18
Sn3



EXISTING
R10-10L-24
Sn8, Sn9



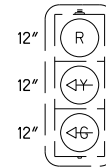
RELOCATED
R10-10L-24
Sn6, Sn7



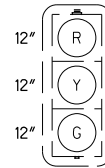
RELOCATED
R10-10L-24
Sn10



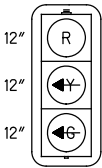
EXISTING
PEDESTRIAN
SIGNAL HEAD
PS-1,
PS-2, PS-3, PS-4
(COVER PS-1, PS-2)



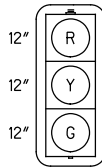
EXISTING
POLYCARBONATE
SIGNAL HEAD
(w/BACKPLATE)
E3, E4



EXISTING
POLYCARBONATE
SIGNAL HEAD
(w/BACKPLATE)
E1,
E2, W1, W2



RELOCATED
POLYCARBONATE
SIGNAL HEAD
(w/BACKPLATE)
N3, N4



RELOCATED
POLYCARBONATE
SIGNAL HEAD
(w/BACKPLATE)
N1, N2



RELOCATED
D3-1
Sn2

Ex. 36" Pullbox, Pb1
Ex. Splice Enclosure
Ex. Slack Installation

Ex. 2-3" Galv. Conduits

Ex. Ground Mtd. Cabinet
and Controller
Ex. Work Pad
Ex. Termination Panel, 6 Fiber
Ex. Uninterruptible Pwr. Supply

PROP. TEMPORARY WOOD
POLE AND DOWN GUY
STA. 157+29, 76' LT.

PROP. TEMP. MESSENGER WIRE
PROP. TEMP. SIGNAL CABLE

Ex. 2" Galv. Conduit

Ex. Signal Support, P1
Ex. Pedestrian Signal Head PS1,
(COVER)
Ex. Power Service
Ex. Pole Mtd. Sign, Sn1
Ex. PTZ Camera

Ex. 2" Galv. Conduit, (ABANDON)
Ex. 2" Galv. Conduit, Power Serv.,
(ABANDON)
Ex. Fiber Optic Cable, (RELOCATE)

TEMP.
CAMERA, C2

Ex. 8' Pedestal
Ex. Pedestrian Signal Head,
Ps4
Ex. Pole Mtd. Sign, Sn5

Ex. 2" Galv. Conduit

Ex. 18" Pullbox, Pb6

Ex. 3" Galv. Conduit,

Ex. 18" Pullbox, Pb3,

PROP. TEMPORARY WOOD
POLE AND DOWN GUY
STA. 159+08, 89' LT.

PROP. FIBER OPTIC CABLE,
SEE SHEET 69

Ex. 3" Galv. Conduit,
Ex. Fiber Optic Cable, W2, 12MM/12SM,

Ex. Signal Support, P2,
Ex. Pedestrian Signal Head PS2, (COVER)
Ex. Pole Mtd. Sign, Sn11 and Sn3, (RELOCATE)
Ex. Decorative Luminaire,

Ex. 2" Galv. Conduit,
Ex. 24" Pullbox, Pb2

Ex. 3" Galv. Conduit,
Ex. 2" Galv. Conduit, Power Serv.,

Ex. Signal Support, P3
Ex. Pedestrian Signal Head PS3
Ex. Pole Mtd. Sign, Sn4
Ex. Video Detection Cameras,
C5 and C6

Ex. 2" Galv. Conduit,

Ex. 24" Pullbox, Pb4
Ex. 2" Galv. Conduit,
(Power Service)

DP&L Pad Mtd.
Transformer

NOTES :

1. MAINTAIN EXISTING DETECTION ZONES.
2. USE EXISTING SIGNAL TIMINGS.
3. SEE MAINTENANCE OF TRAFFIC PLANS FOR SIGNING.

LEGEND

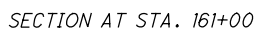
	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12" WITH ARROWS		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
PEDESTRIAN SIGNAL		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
LUMINAIRE, CONVENTIONAL		
CONTROLLER CABINET AND WORK PAD (332)		
CONTROLLER CABINET AND WORK PAD (TS-2)		
TRAFFIC PULL BOX		
VIDEO DETECTION CAMERA		
DILEMMA ZONE RADAR DETECTION UNIT		
STOP BAR RADAR DETECTION UNIT		
PTZ CAMERA		
ETHERNET RADIO		
LOOP DETECTOR		
DETECTION ZONE		



CALCULATED
L.A.S.
CHECKED
PCG

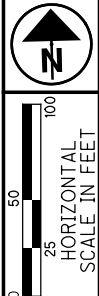
TEMPORARY TRAFFIC SIGNAL PLAN - PHASE 1 & 1A RAMP H, RAMP J AND AUSTIN BLVD.

MOT-75-0.76





FOR LEGEND SEE SHEET 14



MOT-75-0.76

20
106

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SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED BMG CHECKED MAG
OFFICE CALCS		7		9			23	24		37	43	47	01/IMS/OT							
													LS	201	11000	LS		ROADWAY		
							540						540	202	23000	540	SY	CLEARING AND GRUBBING		
							1,601						1,601	202	23010	1,601	SY	PAVEMENT REMOVED		
							1,072						1,072	202	30000	1,072	SF	PAVEMENT REMOVED, ASPHALT		
							451						451	202	30800	451	SY	WALK REMOVED		
							169						169	202	32000	169	FT	TRAFFIC ISLAND REMOVED		
							890						890	202	32500	890	FT	CURB REMOVED		
							165						165	202	35100	165	FT	CURB AND GUTTER REMOVED		
							9						9	202	58100	9	EACH	PIPE REMOVED, 24" AND UNDER		
																		CATCH BASIN REMOVED		
				50						1,277	283	275	1,885	203	10000	1,885	CY	EXCAVATION		GENERAL SUMMARY
				50						133	15	12	210	203	20000	210	CY	EMBANKMENT		
4,184													4,184	204	10000	4,184	SY	SUBGRADE COMPACTION		
										337			337	204	13000	337	CY	EXCAVATION OF SUBGRADE		
													45	204	30010	45	CY	GRANULAR MATERIAL, TYPE B		
350													350	204	30020	350	CY	GRANULAR MATERIAL, TYPE C		
1,050													1,050	204	50000	1,050	SY	GEOTEXTILE FABRIC		
							375						375	608	52000	375	SF			
																		EROSION CONTROL		
		3											3	601	21050	3	SY	TIED CONCRETE BLOCK MAT, TYPE 1		MOT - 75 - 0.76
								31					31	601	21060	31	SY	TIED CONCRETE BLOCK MAT, TYPE 2		
		2											2	659	00100	2	EACH	SOIL ANALYSIS TEST		
		670						37					707	659	00300	707	CY	TOPSOIL		
		6,366											6,366	659	10000	6,366	SY	SEEDING AND MULCHING		
		319											319	659	14000	319	SY	REPAIR SEEDING AND MULCHING		
		319											319	659	15000	319	SY	INTER-SEEDING		
		0.89											0.89	659	20000	0.89	TON	COMMERCIAL FERTILIZER		
		1.32											1.32	659	31000	1.32	ACRE	LIME		
		37											37	659	35000	37	MGAL	WATER		
								335					335	670	00700	335	SY	DITCH EROSION PROTECTION		21 106
													LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN		
													24,000	832	30000	24,000	EACH	EROSION CONTROL		
																		DRAINAGE		
													991	605	11110	991	FT	6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC		
		50											50	605	13300	50	FT	6" UNCLASSIFIED PIPE UNDERDRAINS		
													132	611	00510	132	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS		
		50											50	611	00900	50	FT	6" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION		
		50											50	611	01100	50	FT	6" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION		
		50											50	611	01400	50	FT	6" CONDUIT, TYPE E, FOR DRAINAGE CONNECTION		
		50											50	611	01500	50	FT	6" CONDUIT, TYPE F, FOR DRAINAGE CONNECTION		
		50											50	611	01500	50	FT	6" CONDUIT, TYPE F		PAVEMENT
								198					198	611	04400	198	FT	12" CONDUIT, TYPE B		
								7					7	611	05900	7	FT	15" CONDUIT, TYPE B		
								7					7	611	07400	7	FT	18" CONDUIT, TYPE B		
								3					3	611	98150	3	EACH	CATCH BASIN, NO. 3		
								1					1	611	98151	1	EACH	CATCH BASIN, NO. 3, AS PER PLAN	8	
								5					5	611	98180	5	EACH	CATCH BASIN, NO. 3A		
								7					7	611	99574	7	EACH	MANHOLE, NO. 3		
		2						1					3	611	99710	3	EACH	PRECAST REINFORCED CONCRETE OUTLET		
9,188													9,188	254	01000	9,188	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=1.5")		21 106
356													356	255	20000	356	FT	FULL DEPTH PAVEMENT SAWING		
320		16											336	301	46000	336	CY	ASPHALT CONCRETE BASE, PG64-22		
610													610	304	20000	610	CY	AGGREGATE BASE		
976													976	407	10000	976	GAL	TACK COAT		
26													26	441	50000	26	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22		
442													442	442	10000	442	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)		
104													104	442	10100	104	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)		

22
106

$$\frac{23}{106}$$


$$\frac{24}{106}$$

PROJECT DATA	
TOTAL AREA (RIGHT-OF-WAY) — — — 20.19 Ac	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE — — — 0.73
PROJECT EARTH DISTURBED AREA — — 1.32 Ac	RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE — — — 0.73
ESTIMATED CONTRACTOR EARTH DISTURBED AREA — — 0.25 Ac	POST-CONSTRUCTION BMP: A VEGETATED BIOFILTER IS PROVIDED TO MEET NPDES POST-CONSTRUCTION REQUIREMENTS
NOTICE OF INTENT EARTH DISTURBED AREA — — — 4.90 Ac	IMMEDIATE RECEIVING WATERS — — — TRIBUTARY TO CLEAR CREEK
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE — — 11.55 Ac	SUBSEQUENT RECEIVING WATER — — — — CLEAR CREEK
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE — — 11.73 Ac	

STORM WATER BMP - VEGETATED BIOFILTER					
LATITUDE/LONGITUDE				EARNED DRAINAGE AREA (ACRES)	WIDTH
BEGIN		END			
39.597053	84.235517	39.597017	84.234154	0.35	4 FT.
TREATMENT PROVIDED:				0.35	
TREATMENT REQUIRED:				0.26	

PROJECT DESCRIPTION

THIS PROJECT WILL CONSTRUCT AN ADDITIONAL WESTBOUND RIGHT TURN LANE, CURB AND GUTTER, AND RELOCATE THE BIKEPATH FOR APPROXIMATELY 700' BETWEEN AUSTIN LANDING AND THE I-75 NORTHBOUND ENTRANCE RAMP. THIS PROJECT WILL ALSO INCLUDE PROPOSED STORM SEWER, PAVEMENT OVERLAY, REPLACE SIGNALS, AND REVISE TRAFFIC CONTROL TO ACCOMMODATE THE ADDITIONAL LANE. SR-741 TRAFFIC CONTROL WILL BE REVISED.



LEGEND

- CATCH BASIN 3A
- CATCH BASIN 3
- CATCH BASIN 3, APP
- MANHOLE NO. 3

USGS MAP: SPRINGBORO, OHIO QUADRANGLE

LATITUDE: 39°35'48" *
LONGITUDE: 84°14'11" *

* LATITUDE AND LONGITUDE ARE APPROX.
CENTER OF PROJECT

0

200

400

0

100

200

CALCULATED

BMG

CHECKED

MAG

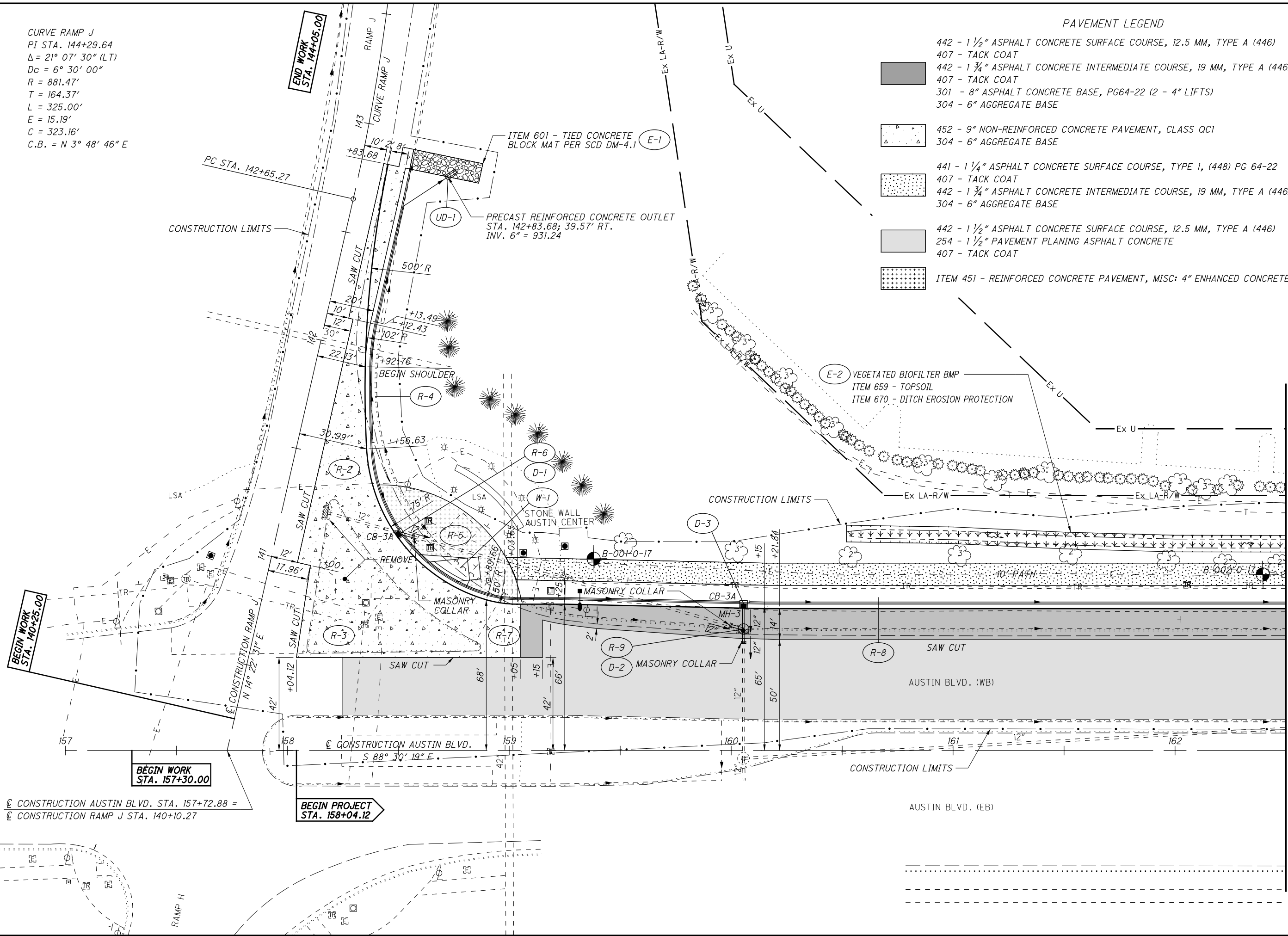
PROJECT SITE PLAN

MOT-75-0.76

24A
106

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CURVE RAMP J
PI STA. 144+29.64
 $\Delta = 21^\circ 07' 30''$ (LT)
 $D_c = 6^\circ 30' 00''$
 $R = 881.47'$
 $T = 164.37'$
 $L = 325.00'$
 $E = 15.19'$
 $C = 323.16'$
C.B. = $N 3^\circ 48' 46'' E$



PAVEMENT LEGEND

- 442 - $1\frac{1}{2}''$ ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)
- 407 - TACK COAT
- 442 - $1\frac{3}{4}''$ ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)
- 407 - TACK COAT
- 301 - $8''$ ASPHALT CONCRETE BASE, PG64-22 (2 - $4''$ LIFTS)
- 304 - $6''$ AGGREGATE BASE
- 452 - $9''$ NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1
- 304 - $6''$ AGGREGATE BASE
- 441 - $1\frac{1}{4}''$ ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG 64-22
- 407 - TACK COAT
- 442 - $1\frac{3}{4}''$ ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)
- 304 - $6''$ AGGREGATE BASE
- 442 - $1\frac{1}{2}''$ ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)
- 254 - $1\frac{1}{2}''$ PAVEMENT PLANING ASPHALT CONCRETE
- 407 - TACK COAT
- ITEM 451 - REINFORCED CONCRETE PAVEMENT, MISC: $4''$ ENHANCED CONCRETE PAVEMENT



0 20 40
HORIZONTAL
SCALE IN FEET

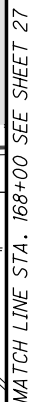
CALCULATED JMD
CHECKED MAG

PLAN-RAMP J STA. 140+53.35 TO STA. 142+83.68
PLAN-AUSTIN BLVD. STA. 158+04.12 TO STA. 162+50.00

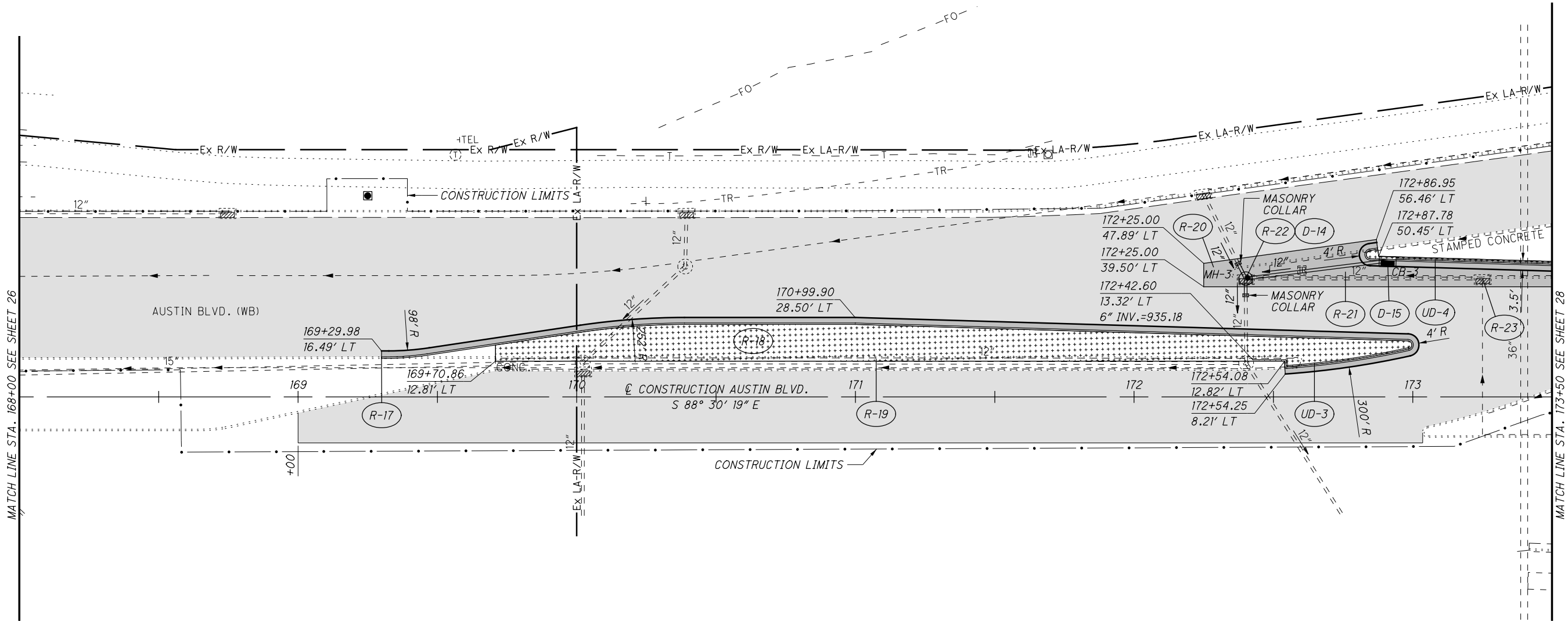
MOT-75-0.76

25
106

MATCH LINE STA. 162+50 SEE SHEET 26

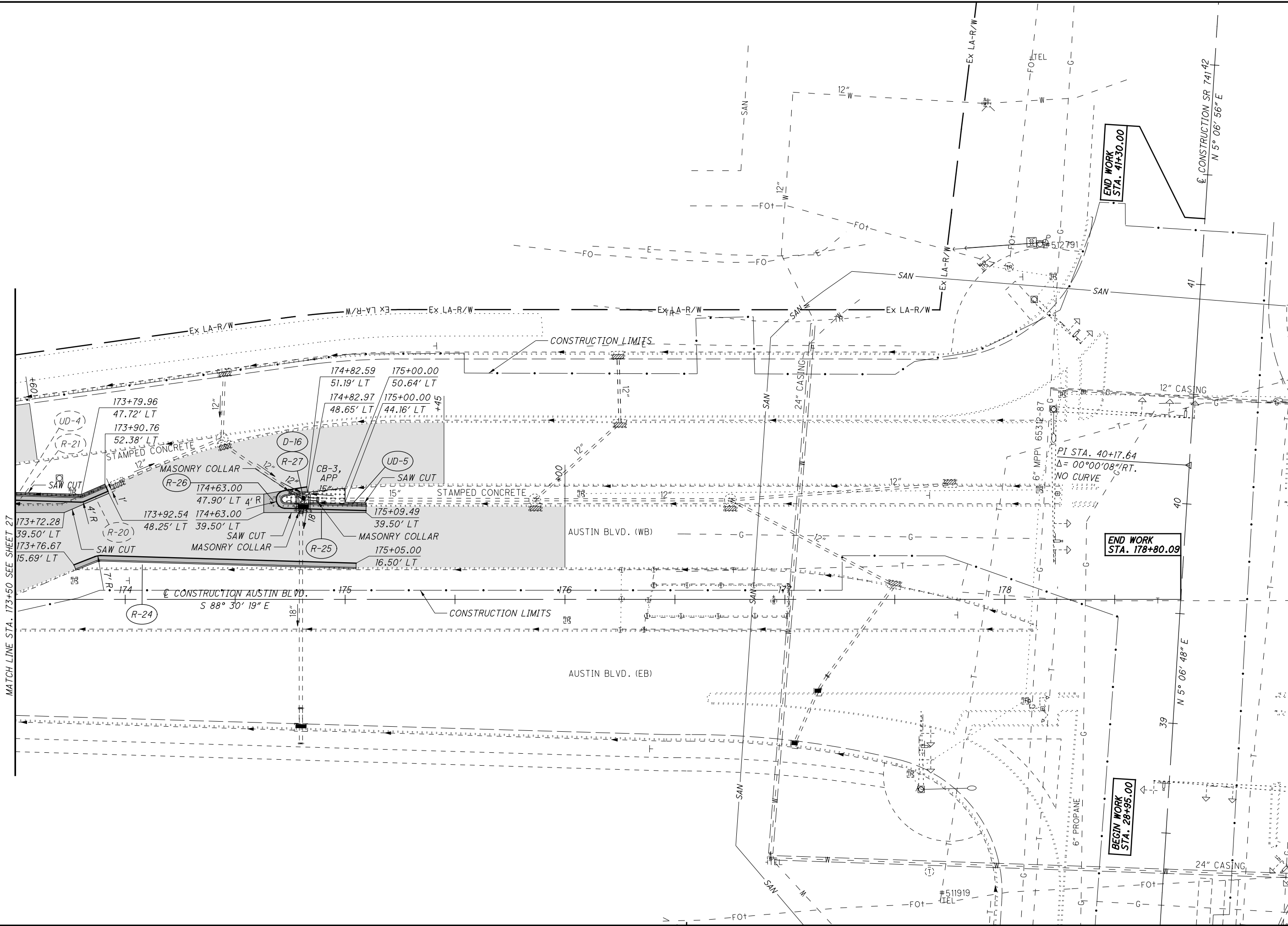


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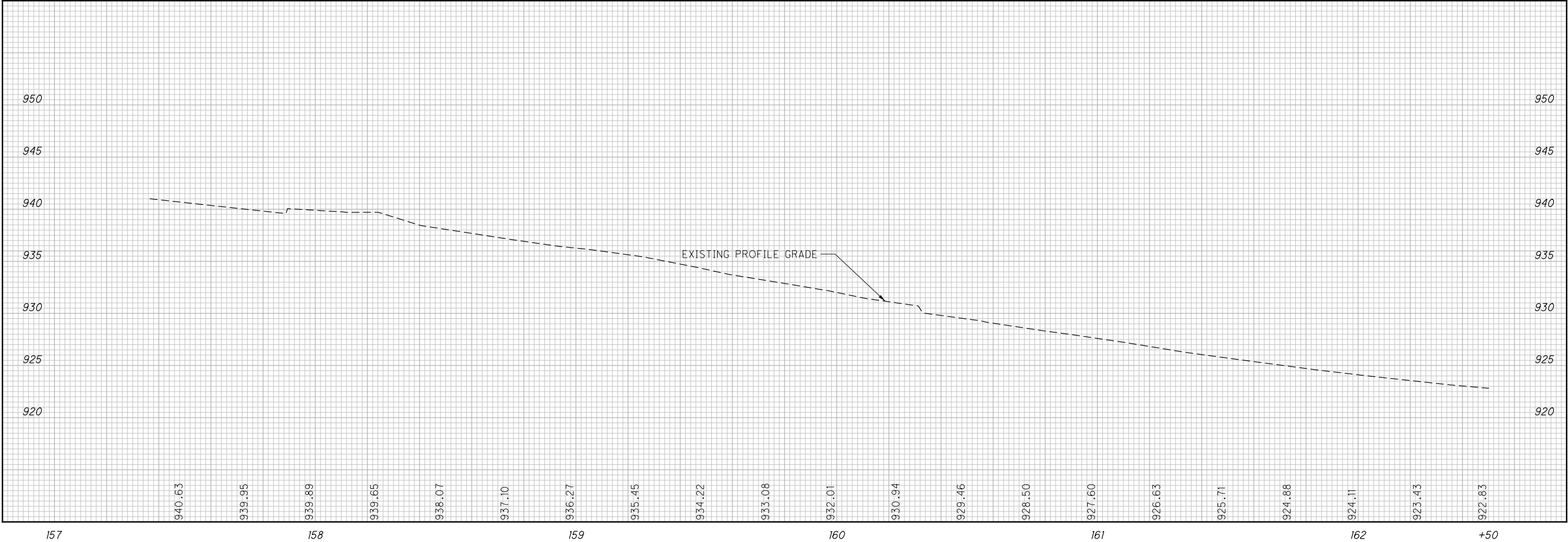
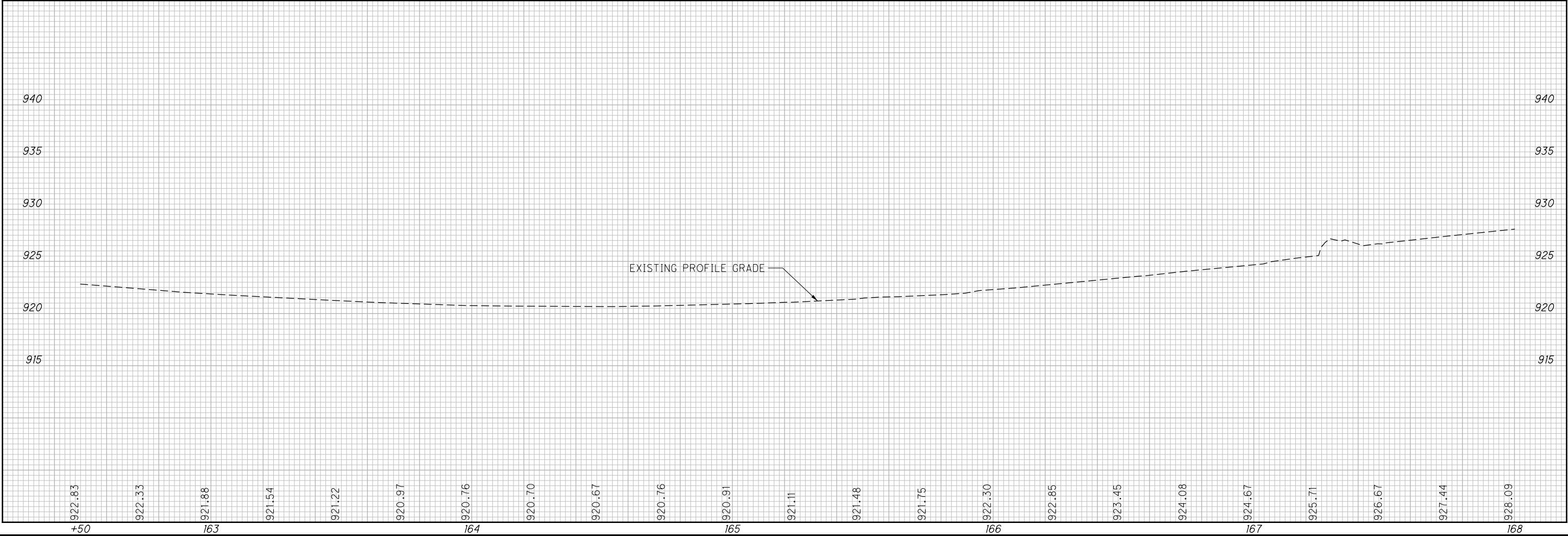


CALCULATED JMD	CHECKED MAG	 HORIZONTAL SCALE IN FEET 0 10 20 40
PLAN - AUSTIN BLVD. STA. 168+00.00 TO STA. 173+50.00		 HORIZONTAL SCALE IN FEET 0 10 20 40
MOT-75-0.76		
27 106		

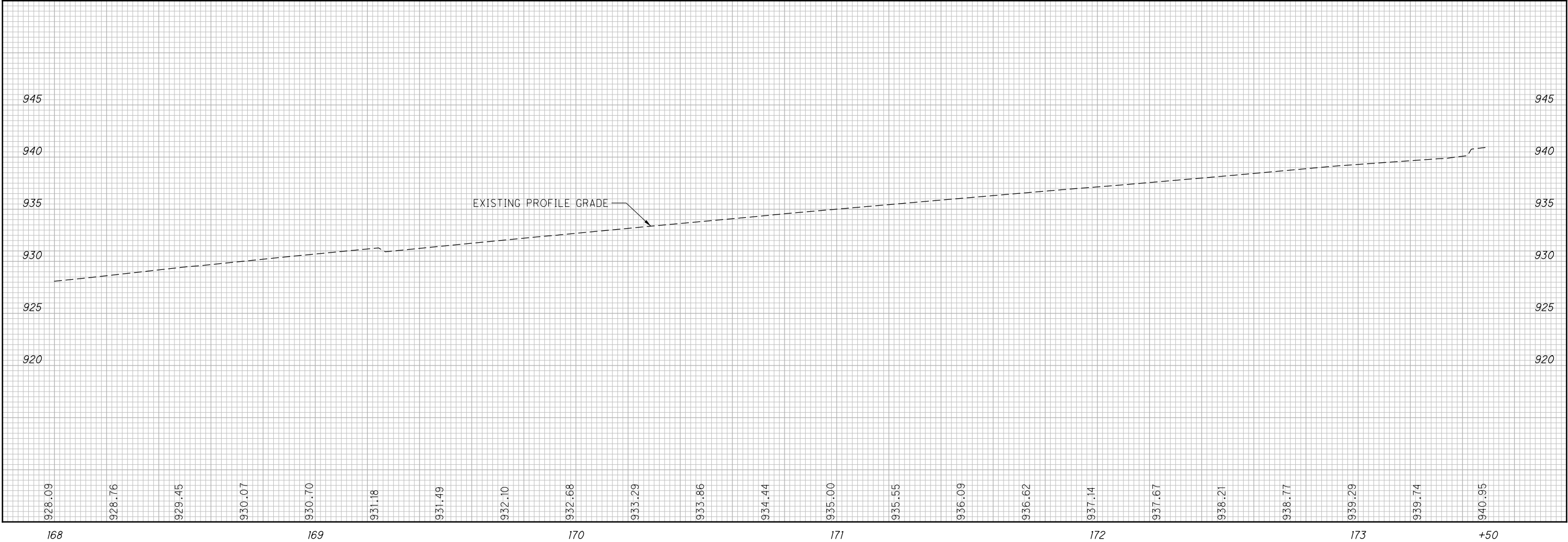
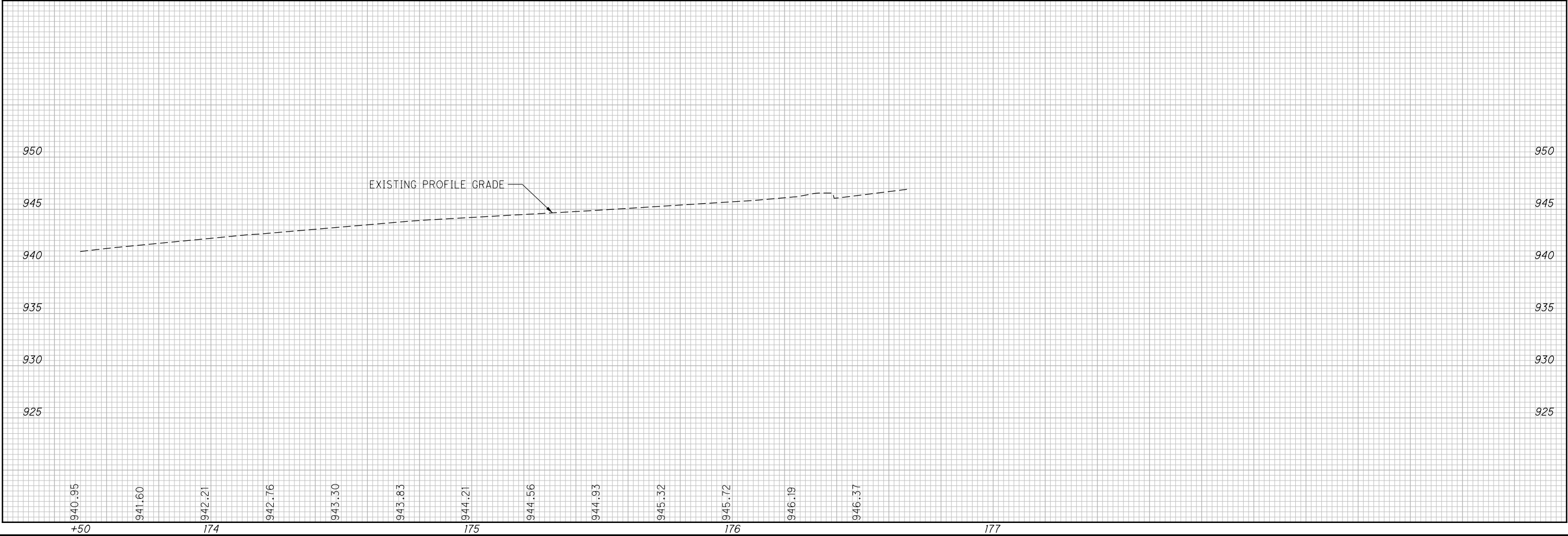
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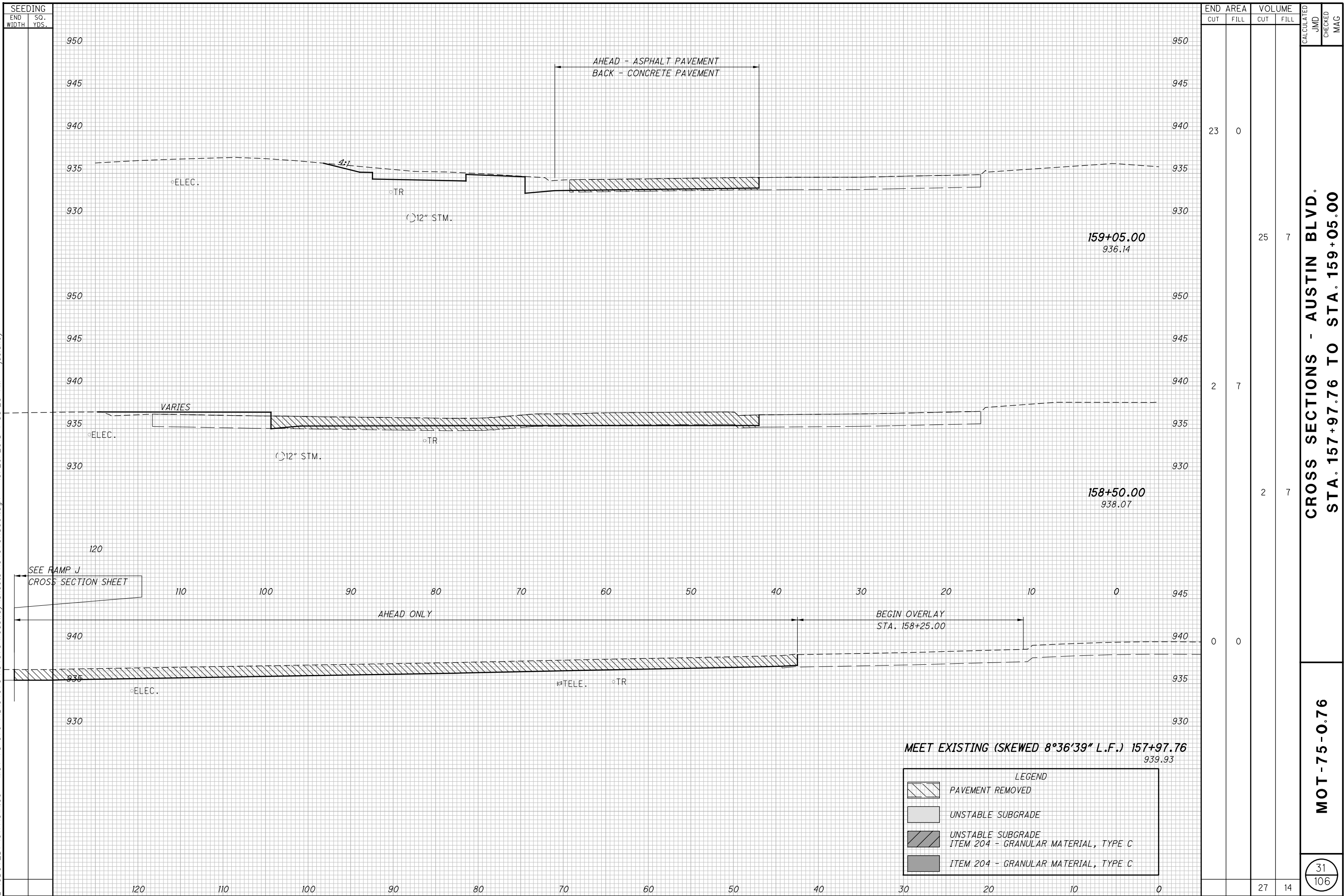
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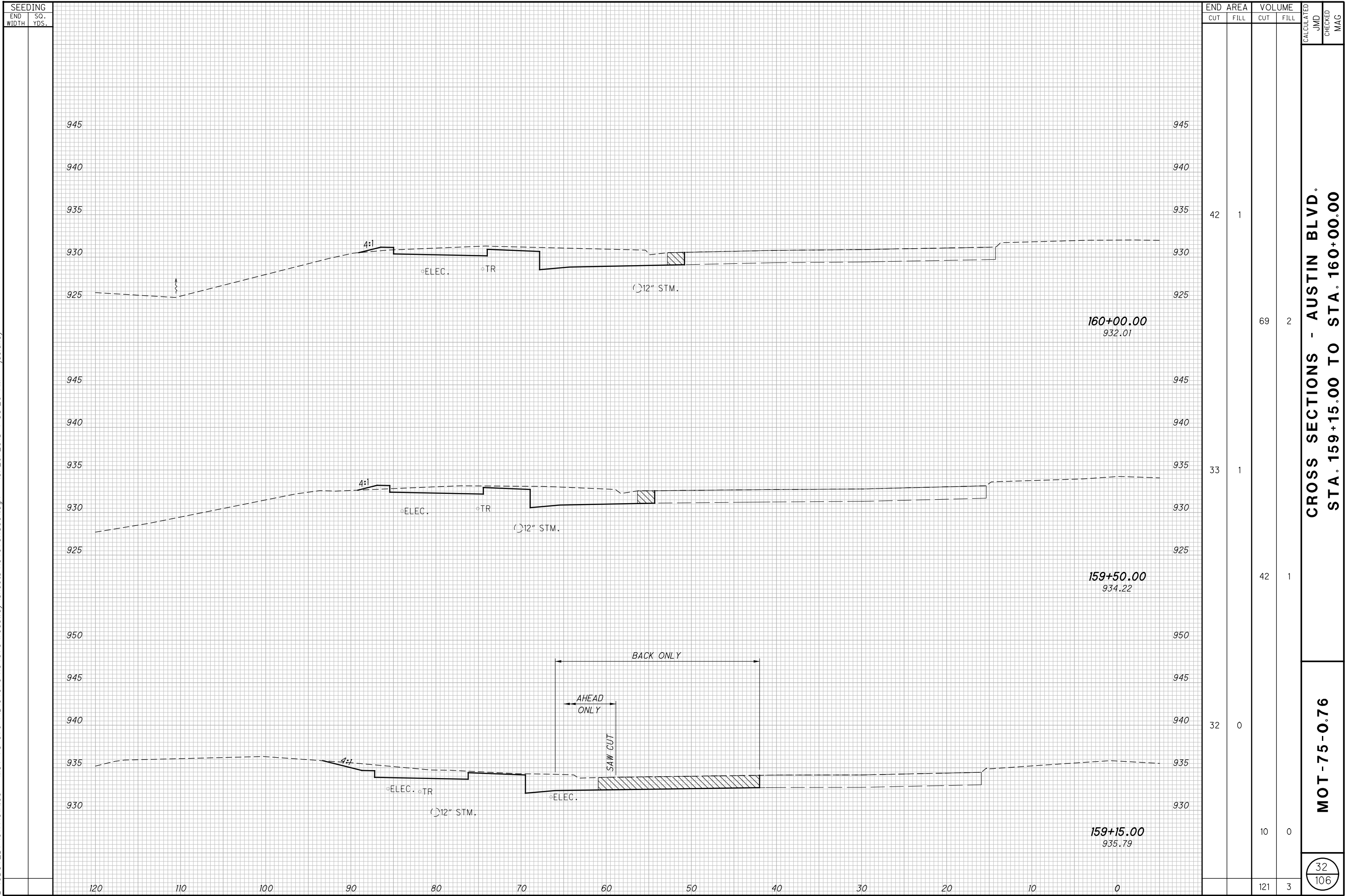
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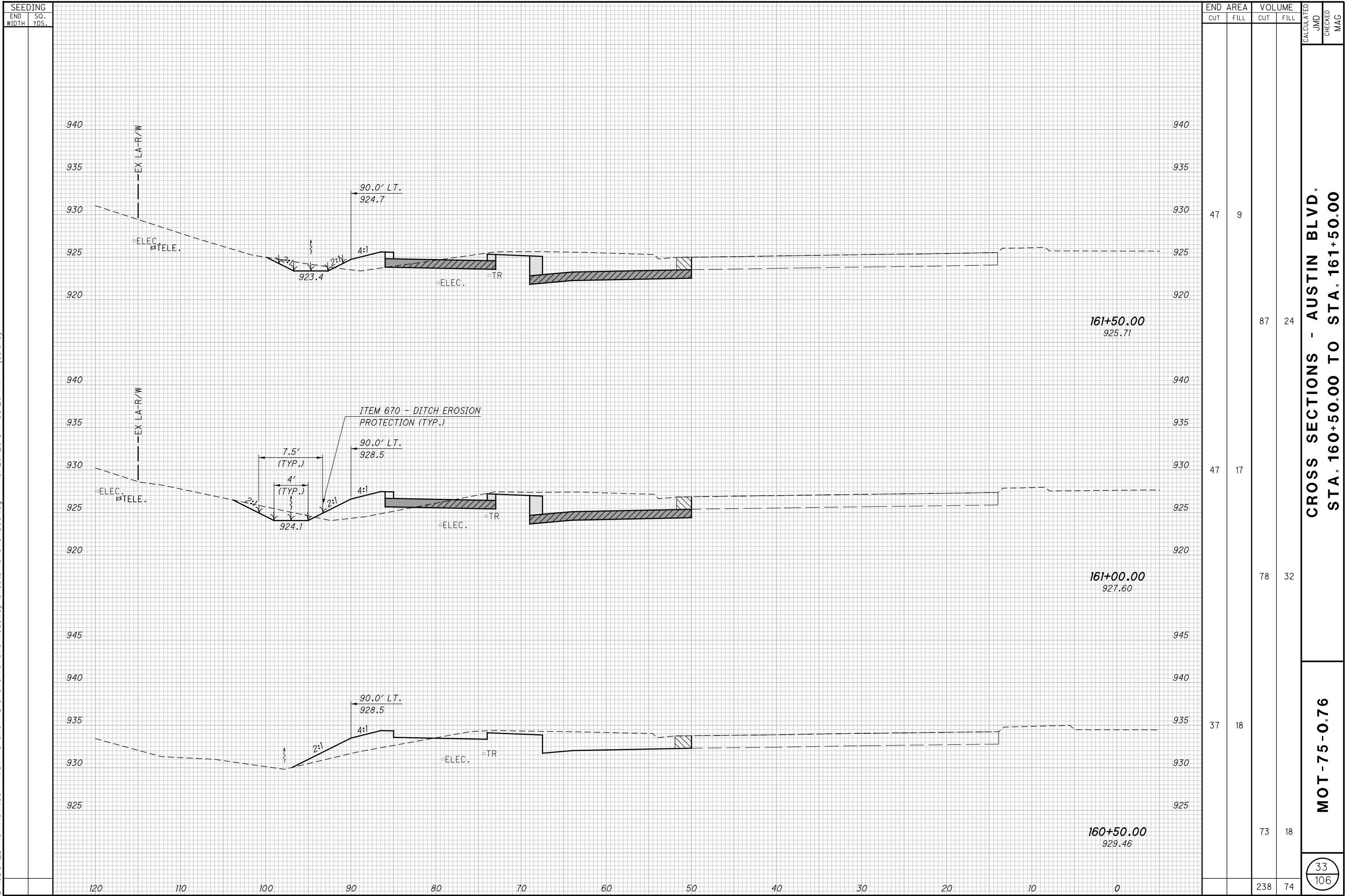
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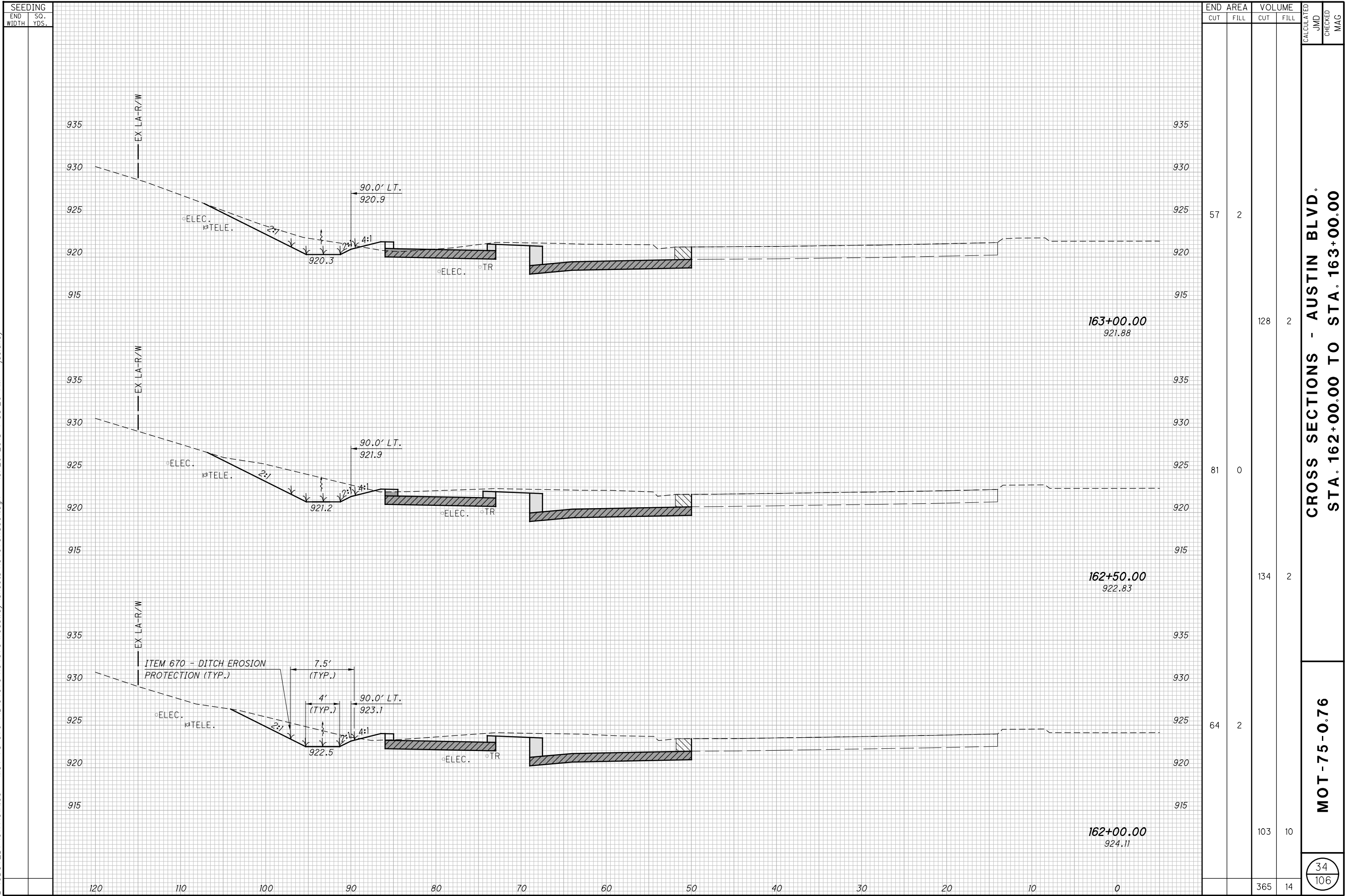
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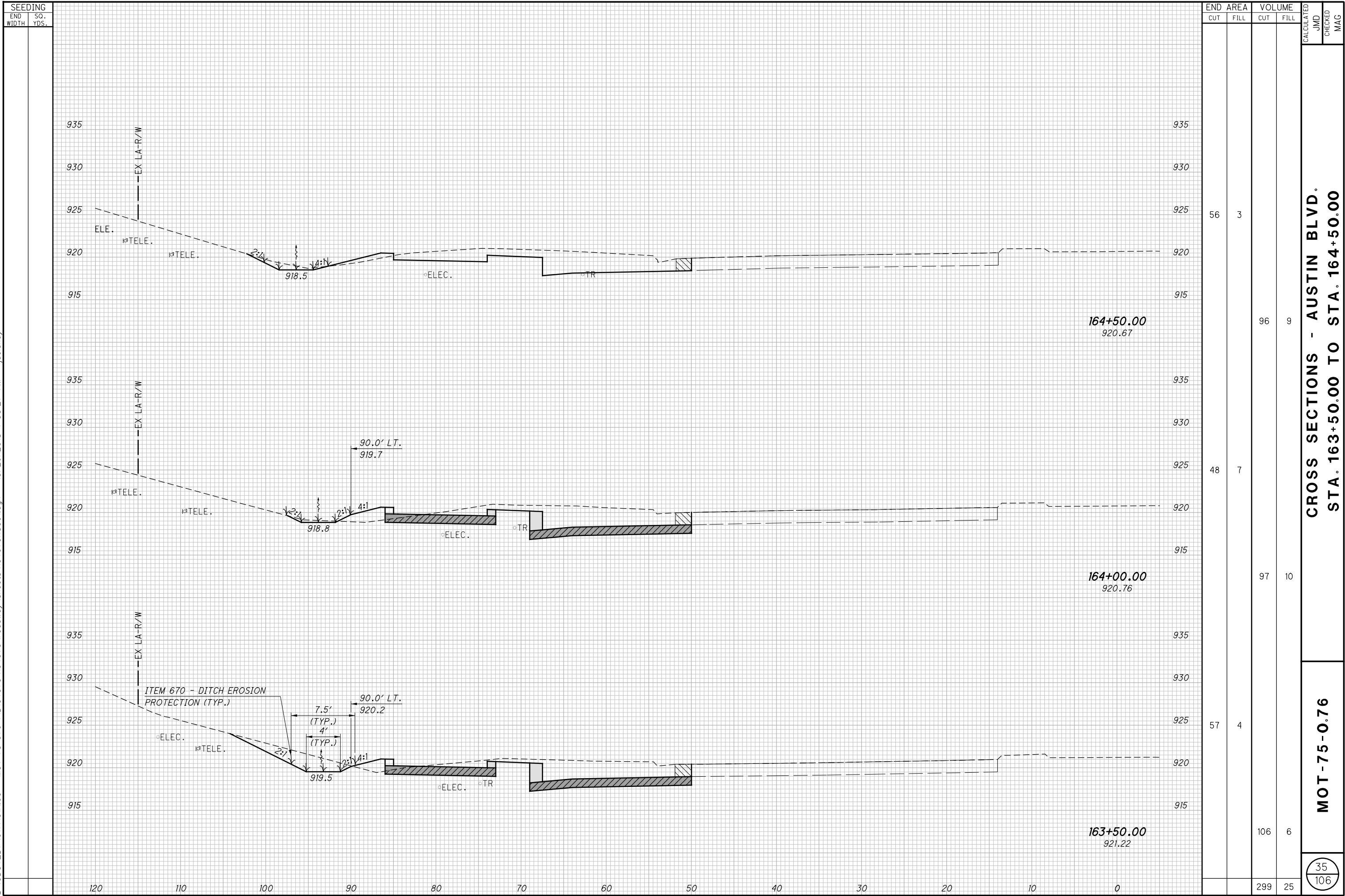


CROSS SECTIONS - AUSTIN BLVD.
STA. 162+00.00 TO STA. 163+00.00

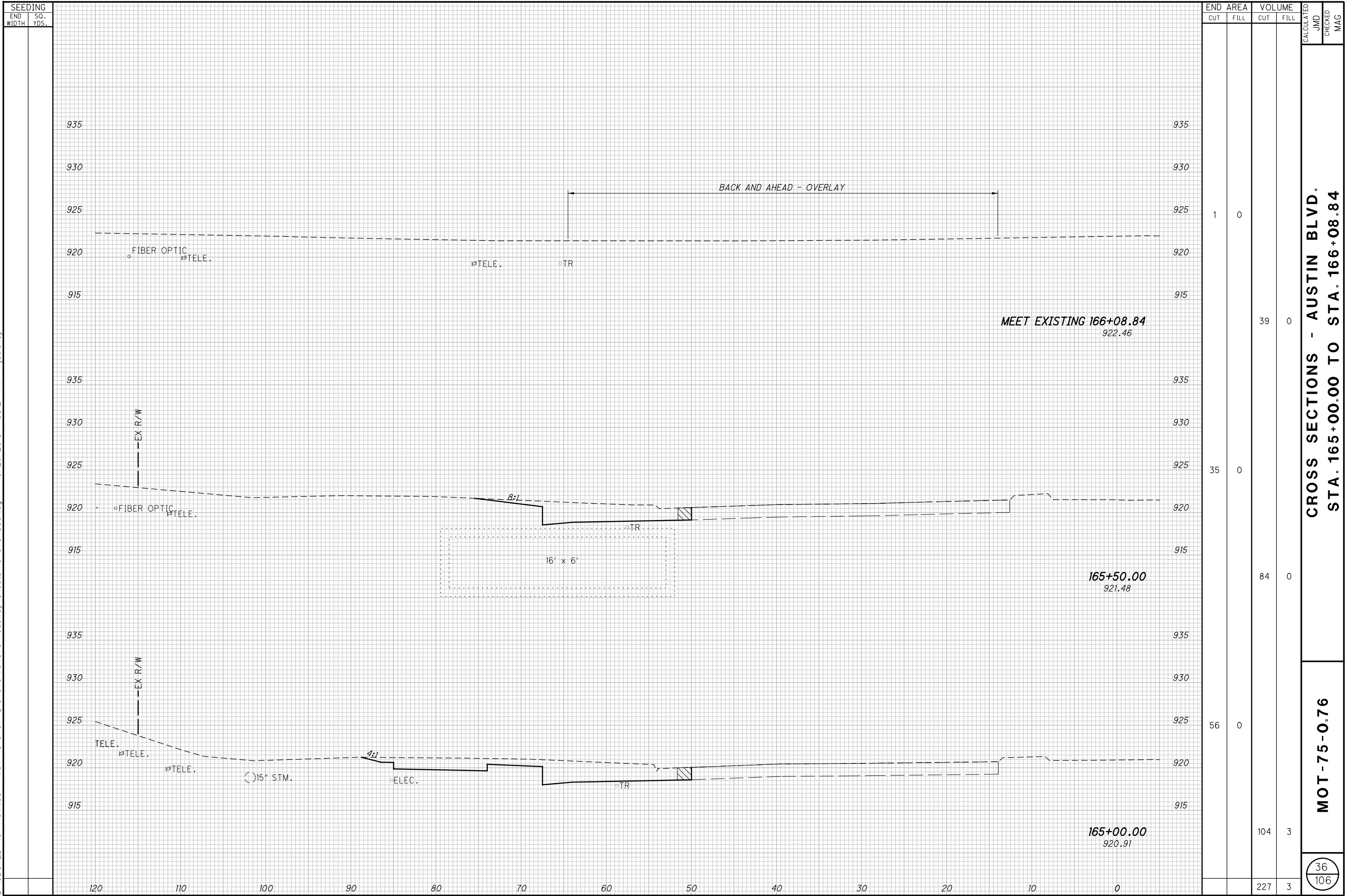
MOT-75-0.76

34
106

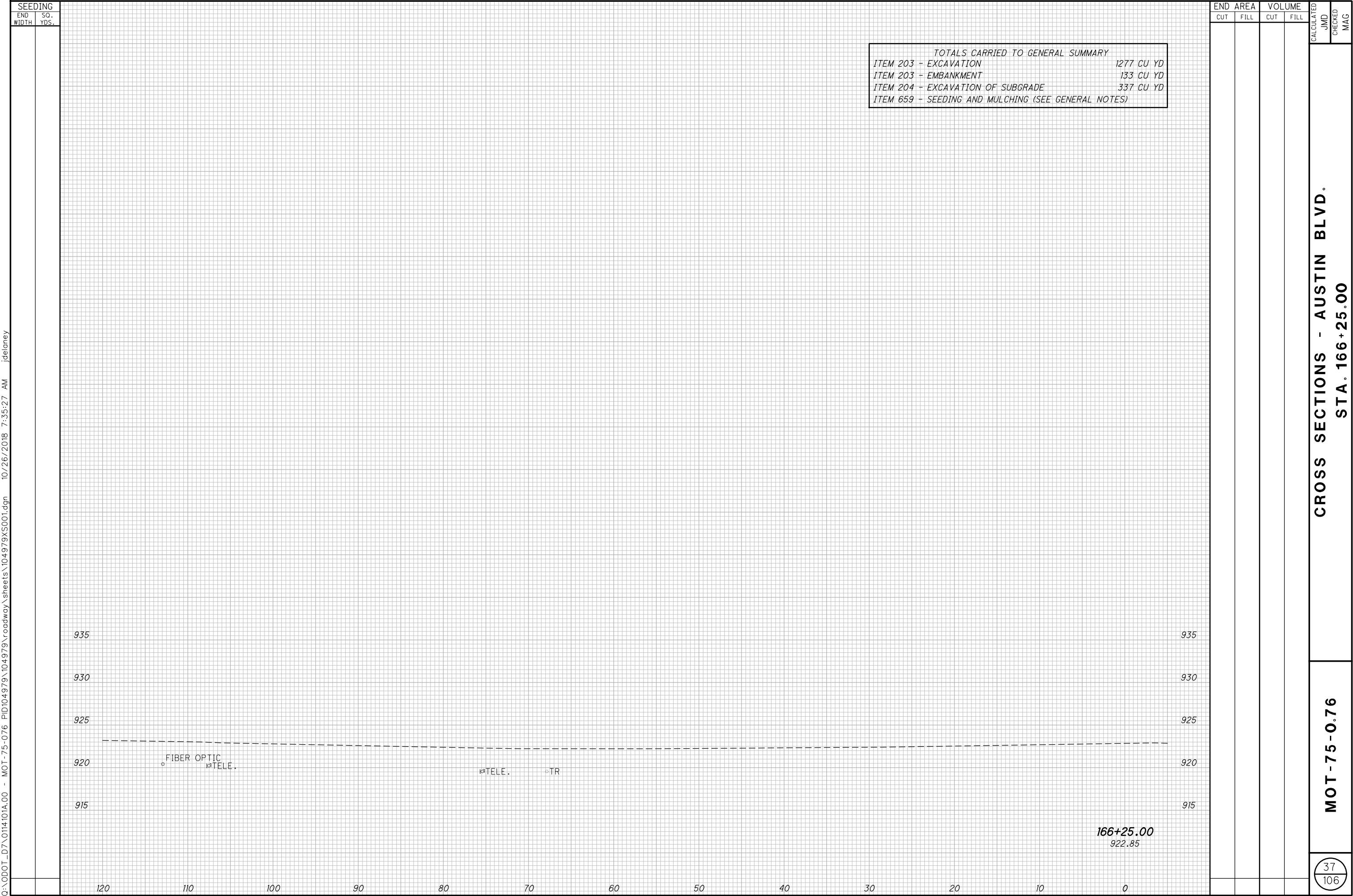
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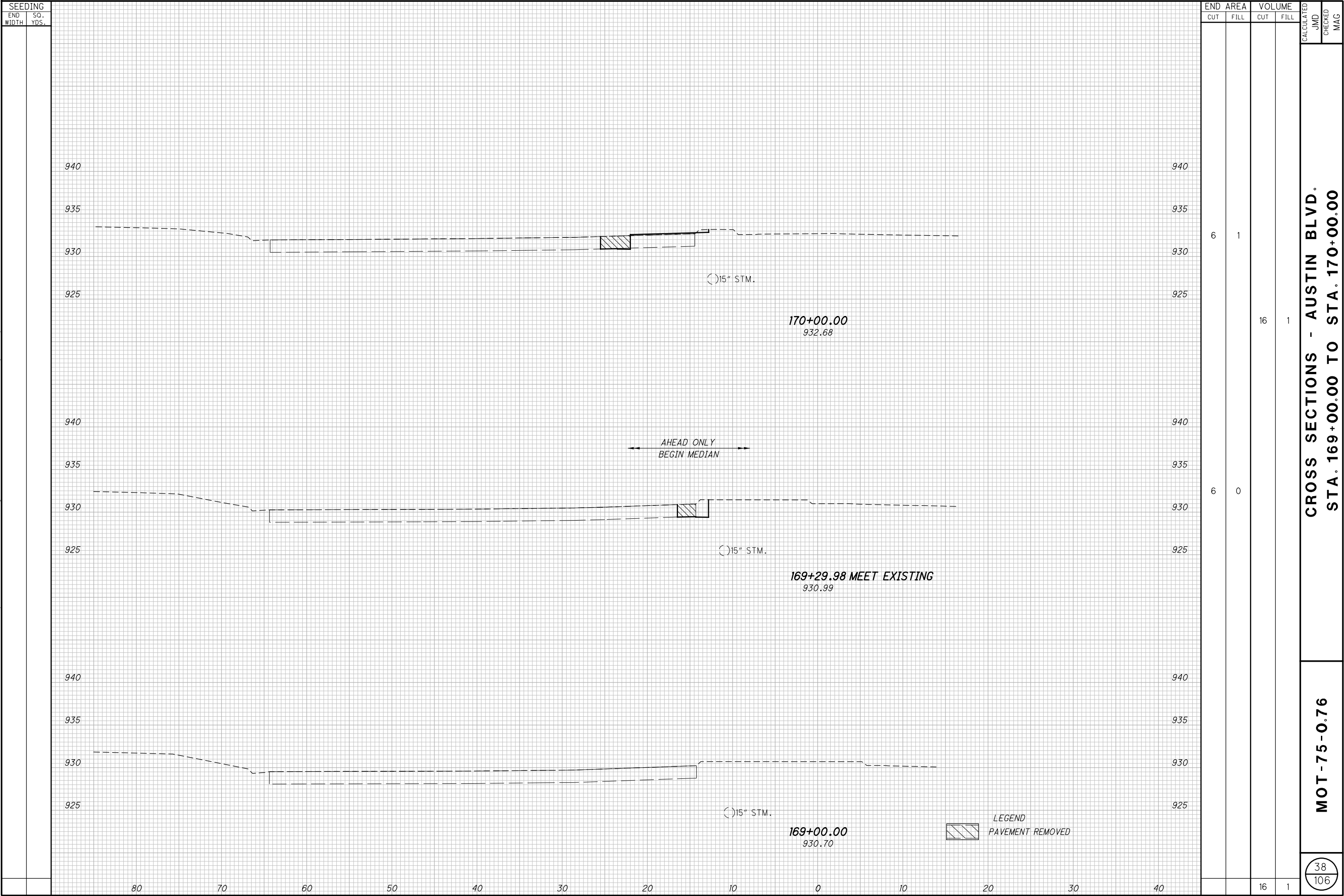
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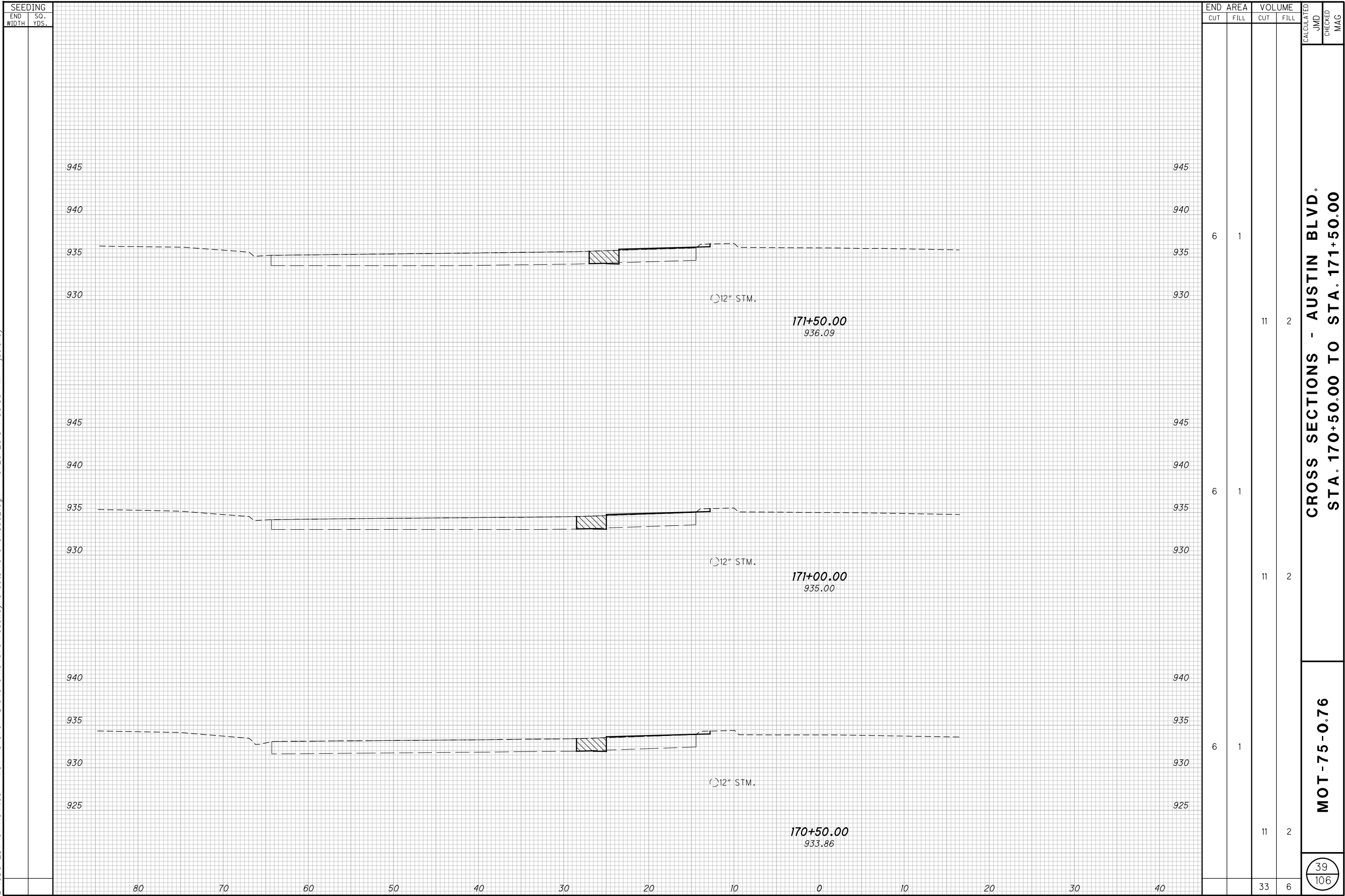


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MOT-75-0.76

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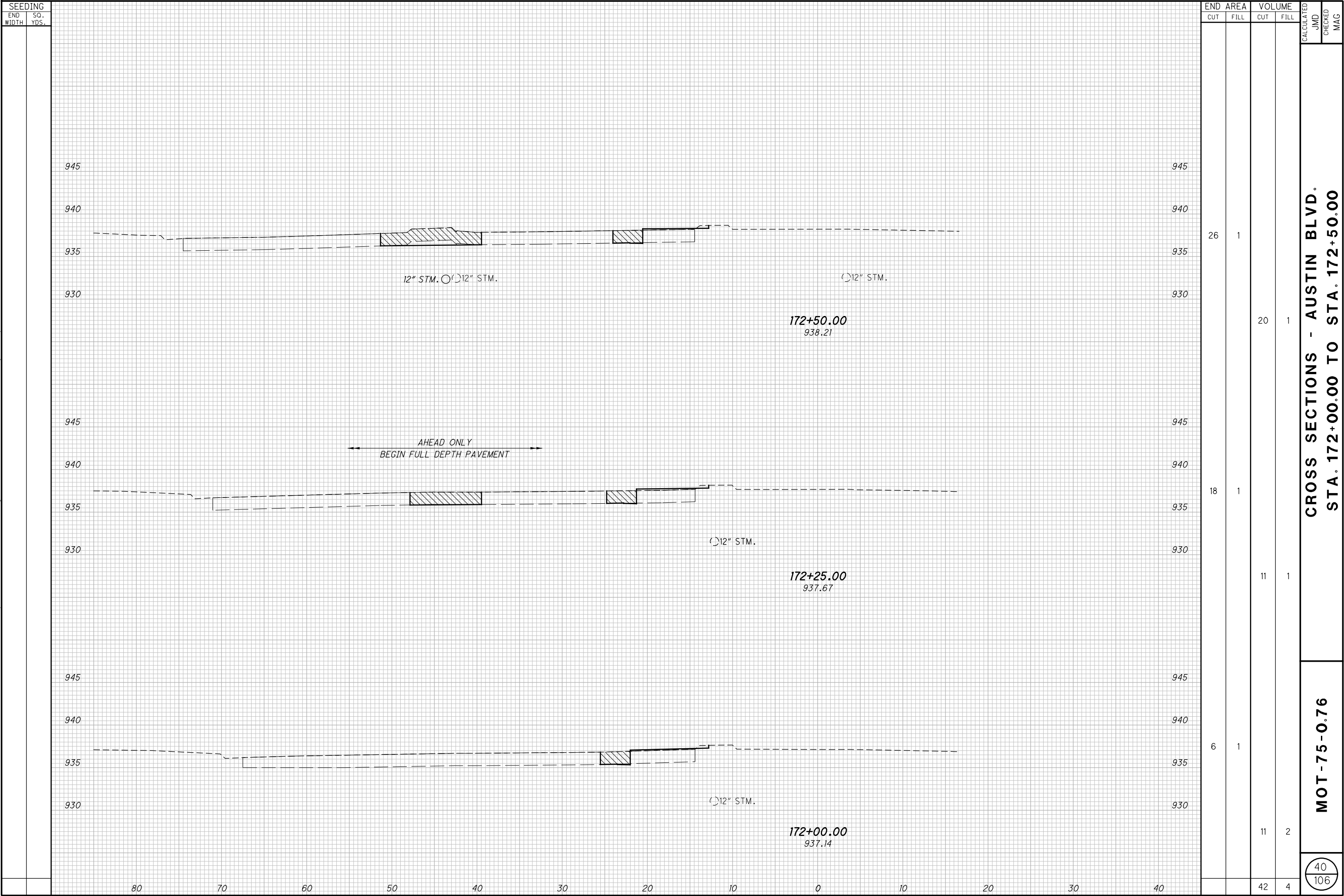


CROSS SECTIONS - AUSTIN BLVD.
STA. 170+50.00 TO STA. 171+50.00

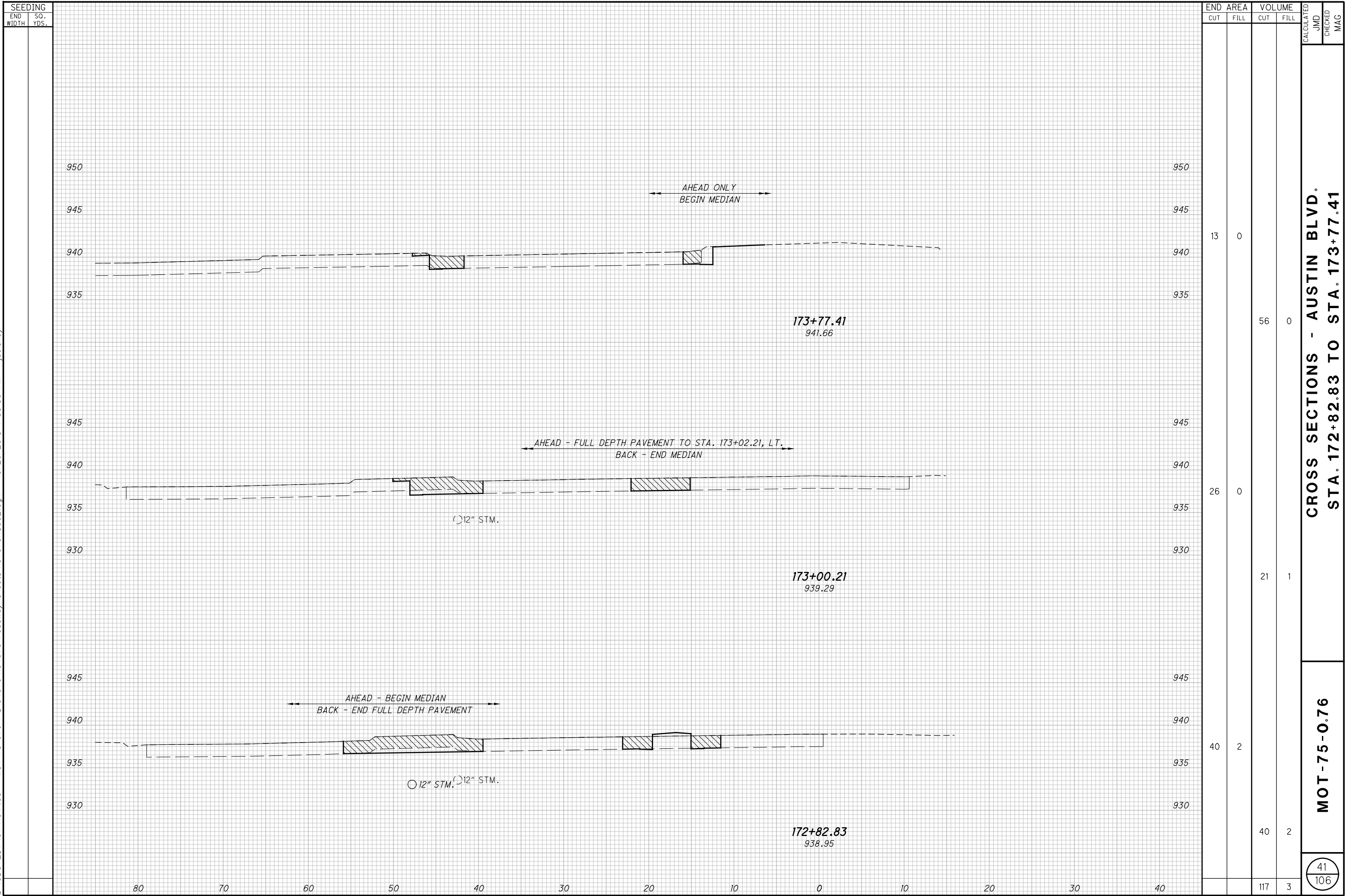
MOT-75-0.76

39
106

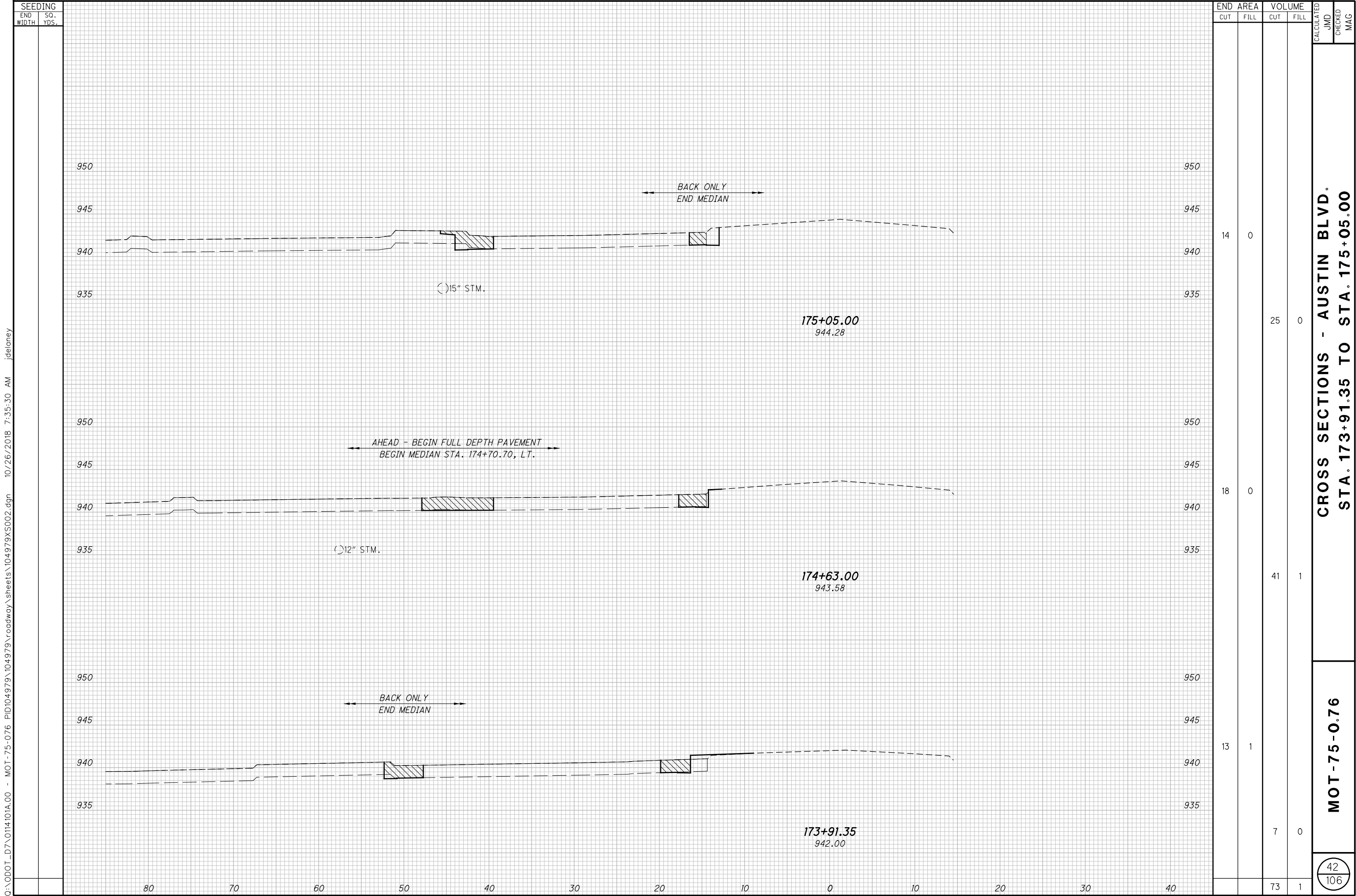
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o:\ODOT_D7\0114101A.00 - MOT-75-076 PID104979\104979\roadway\sheets\104979XS002.dgn 10/26/2018 7:35:30 AM jdelaney



o:\ODOT_D7\0114101A.00 - MOT-75-076 PID104979\104979\roadway\sheets\104979XS002.dgn 10/26/2018 7:35:30 AM jdelaney

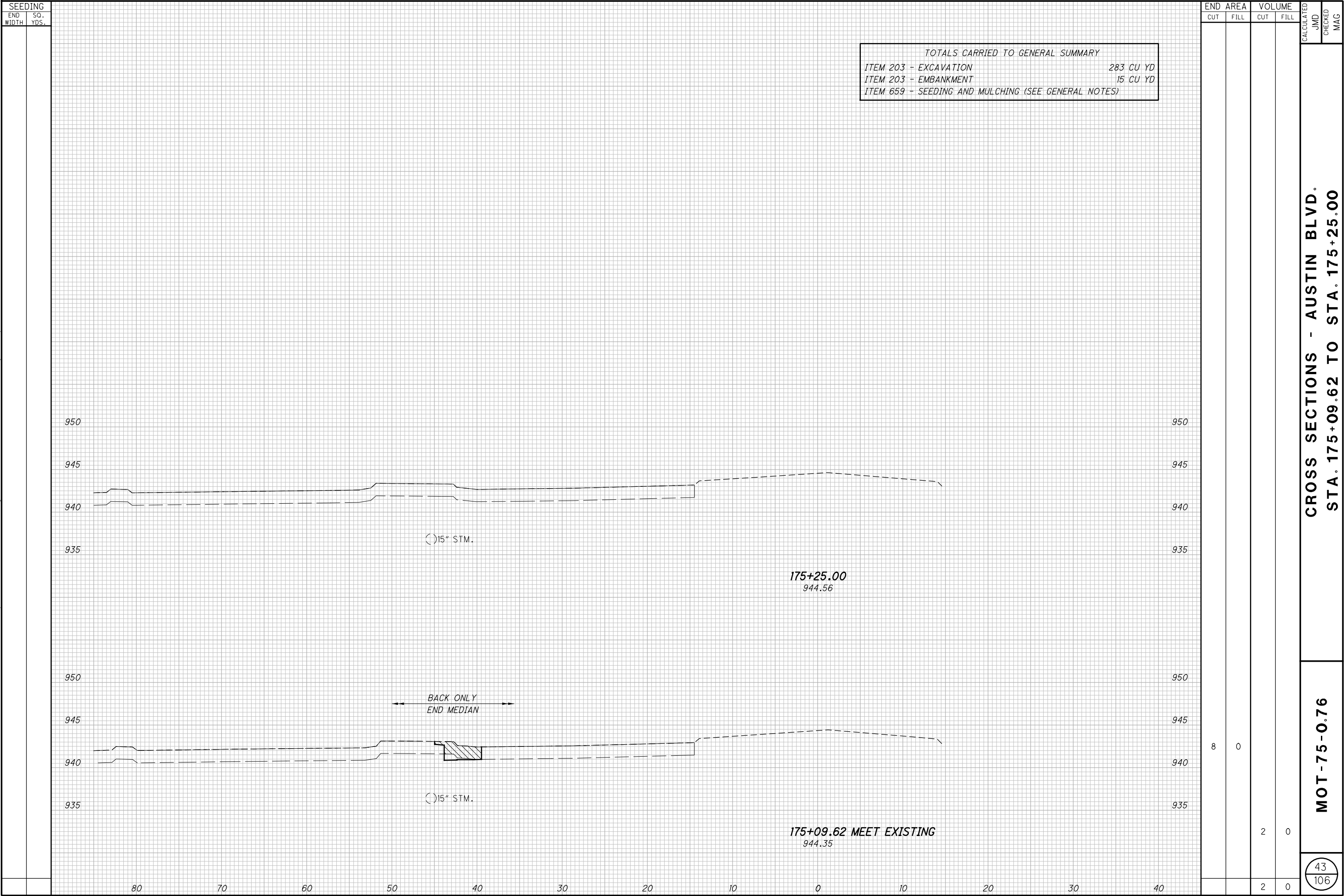


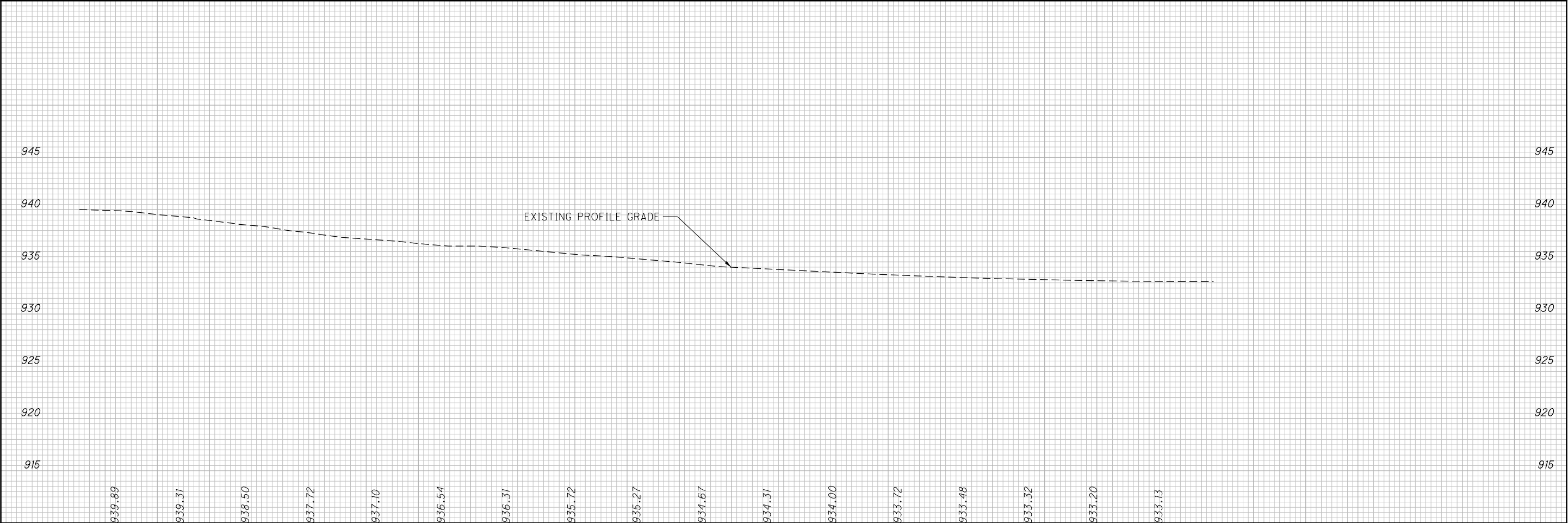
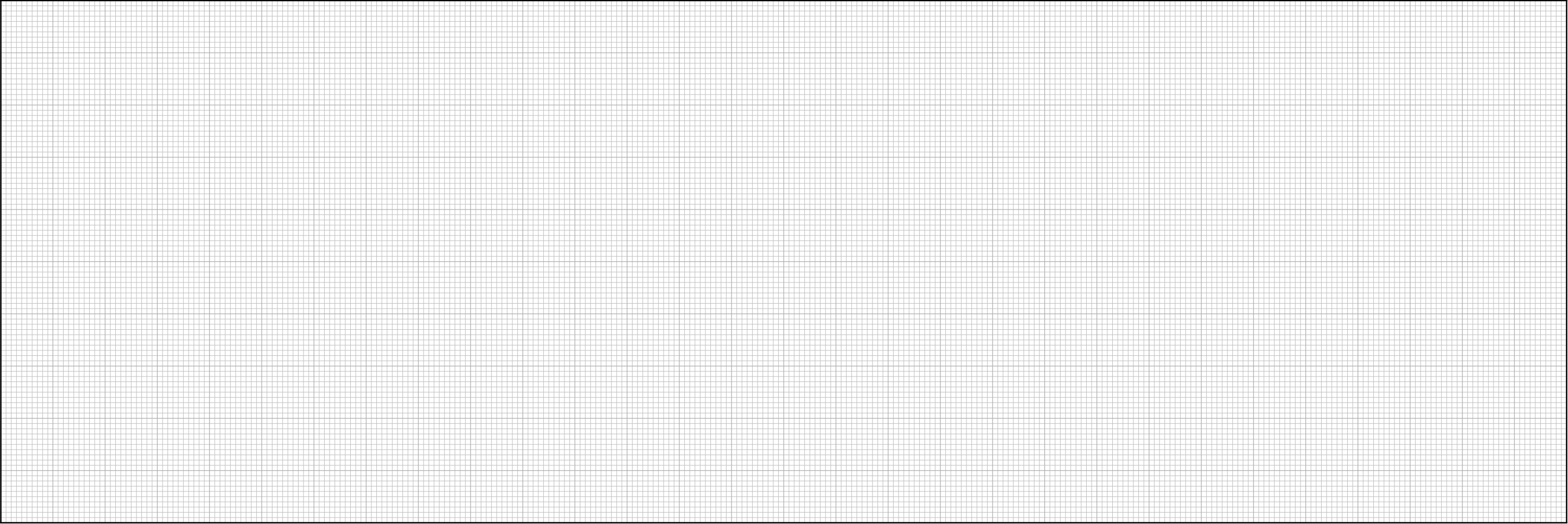
CROSS SECTIONS - AUSTIN BLVD.
STA. 173+91.35 TO STA. 175+05.00

MOT-75-0.76

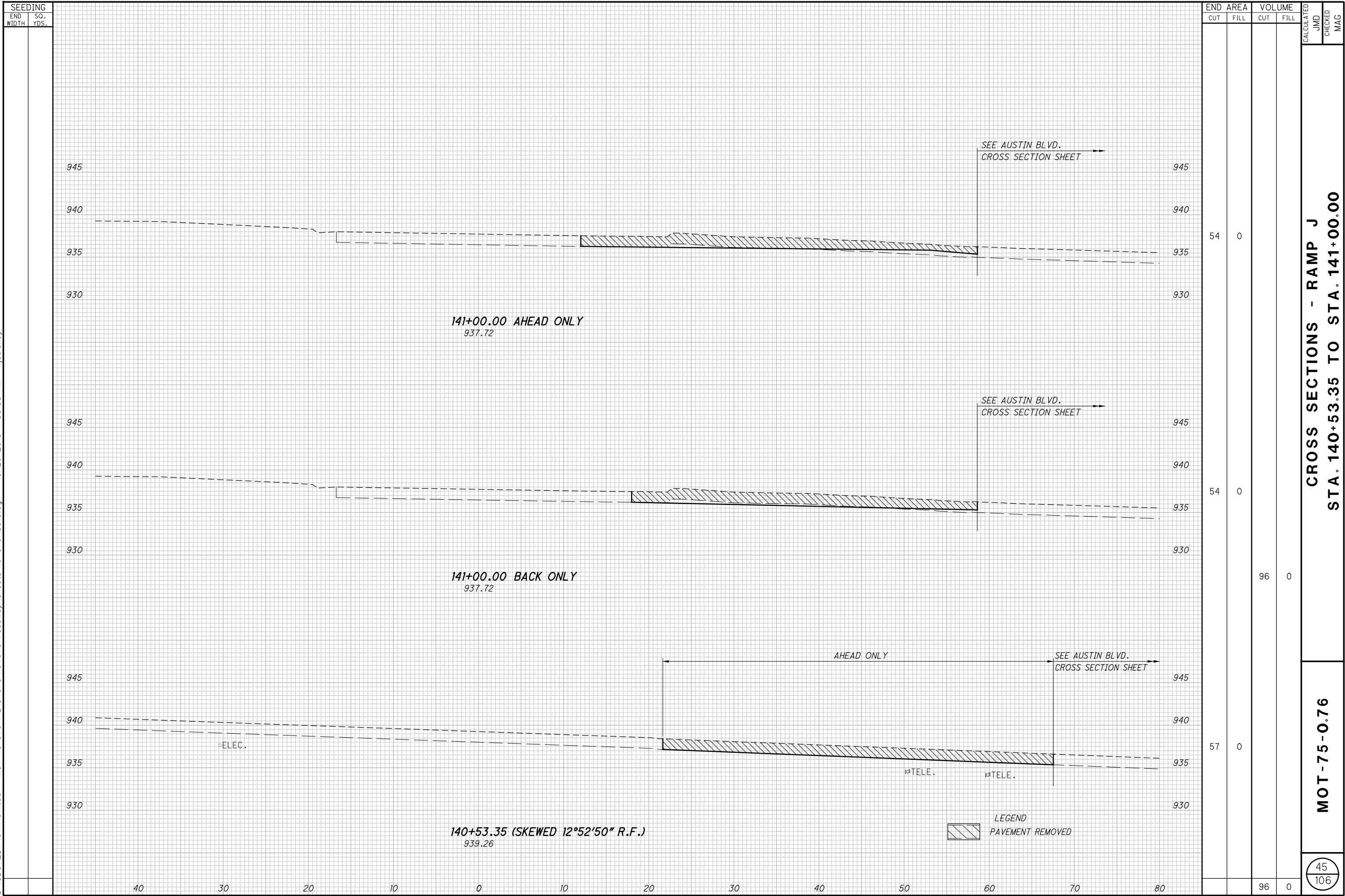
42
106

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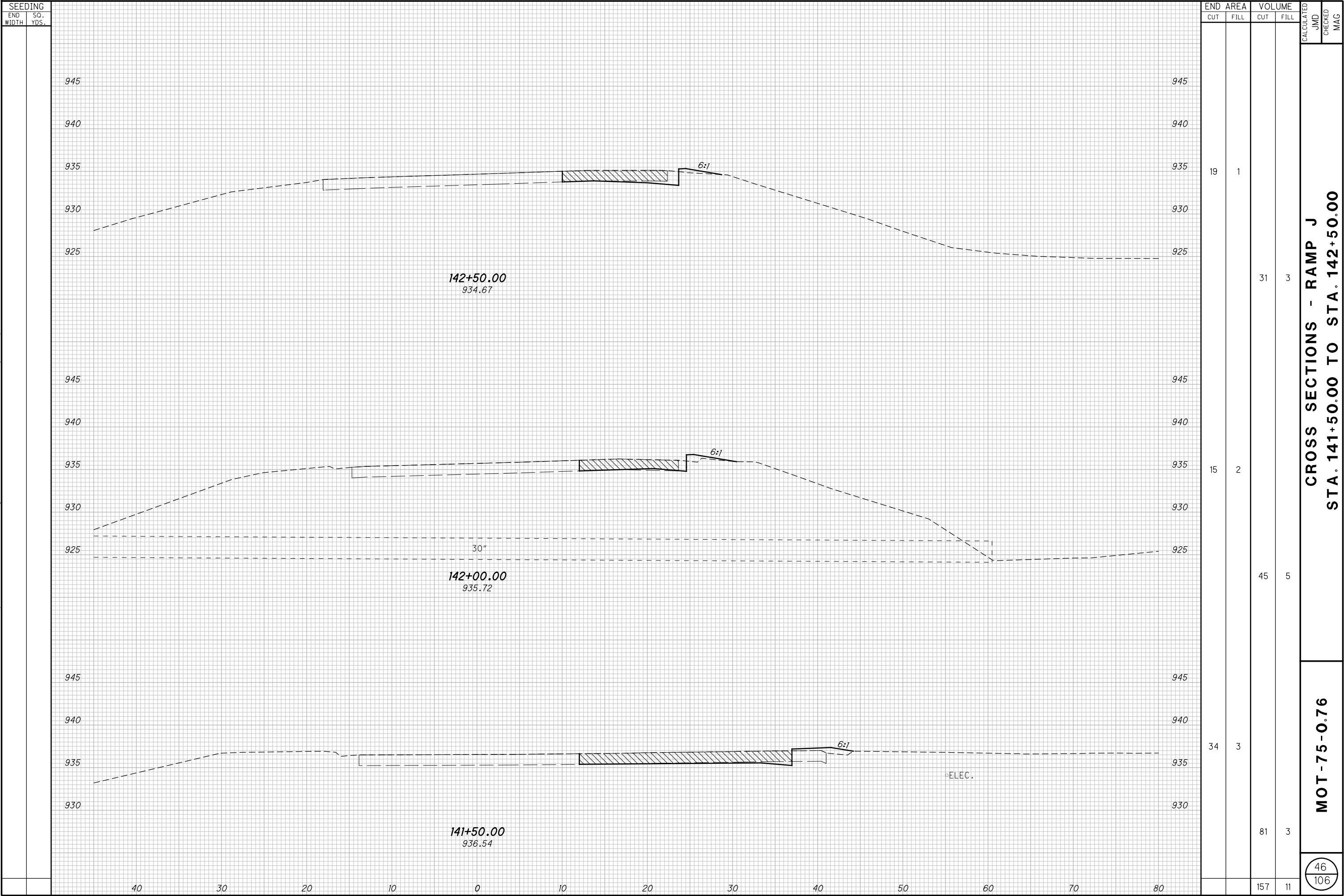




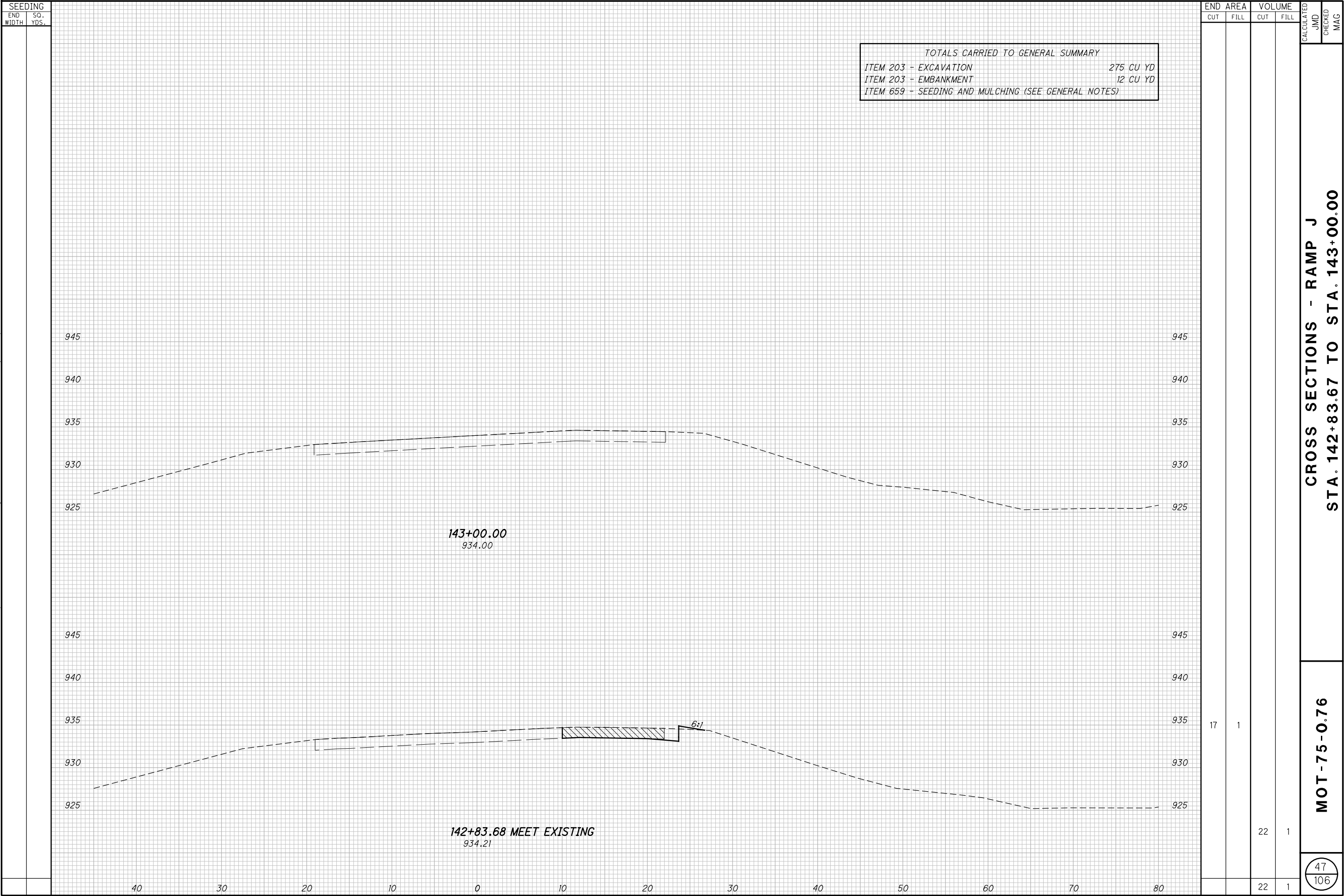
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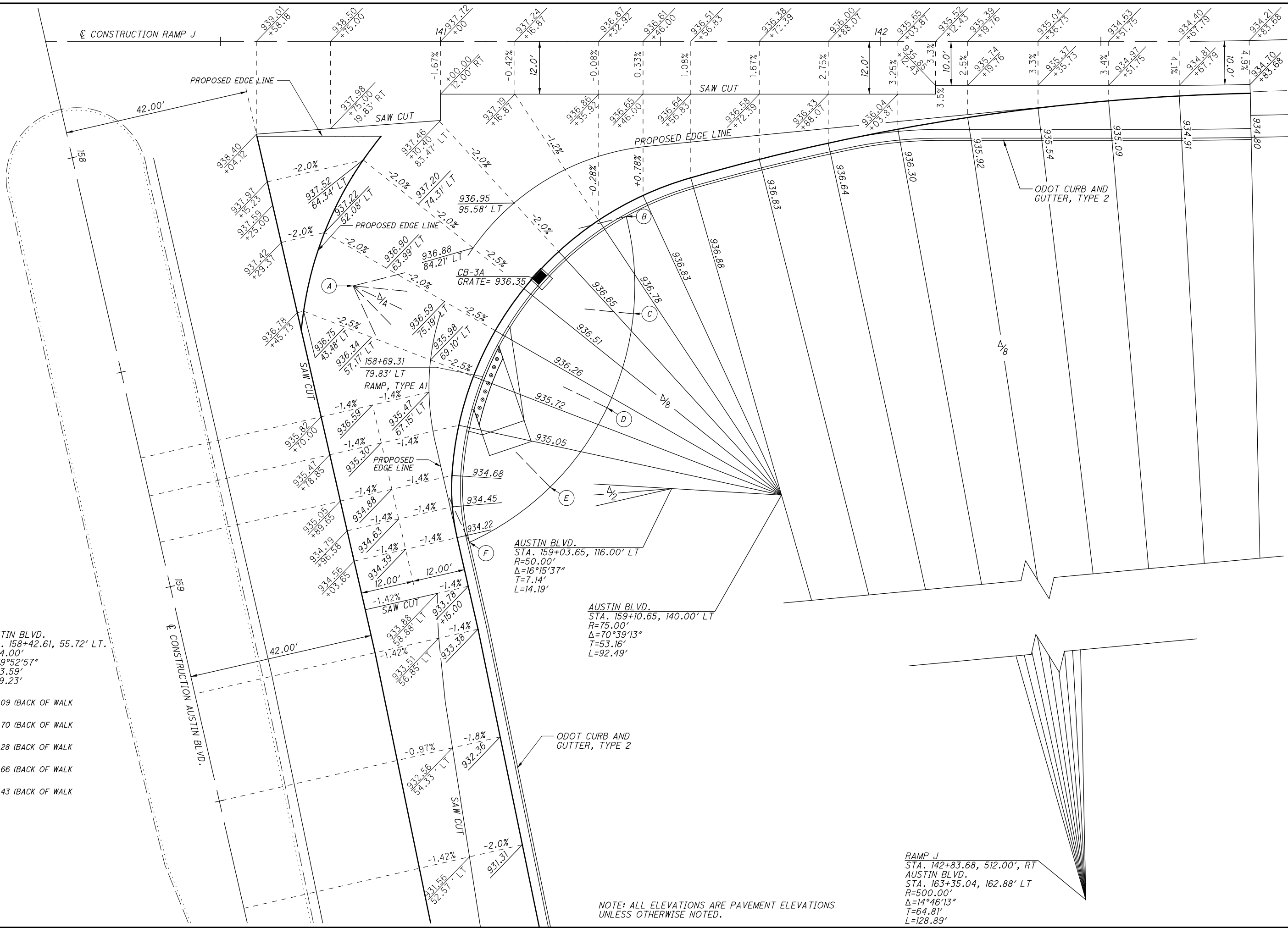


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- (A) AUSTIN BLVD.
STA. 158+42.61, 55.72' LT.
R=64.00'
 $\Delta=79^\circ52'57''$
T=53.59'
L=89.23'
- (B) 937.09 (BACK OF WALK)
- (C) 936.70 (BACK OF WALK)
- (D) 936.28 (BACK OF WALK)
- (E) 935.66 (BACK OF WALK)
- (F) 934.43 (BACK OF WALK)

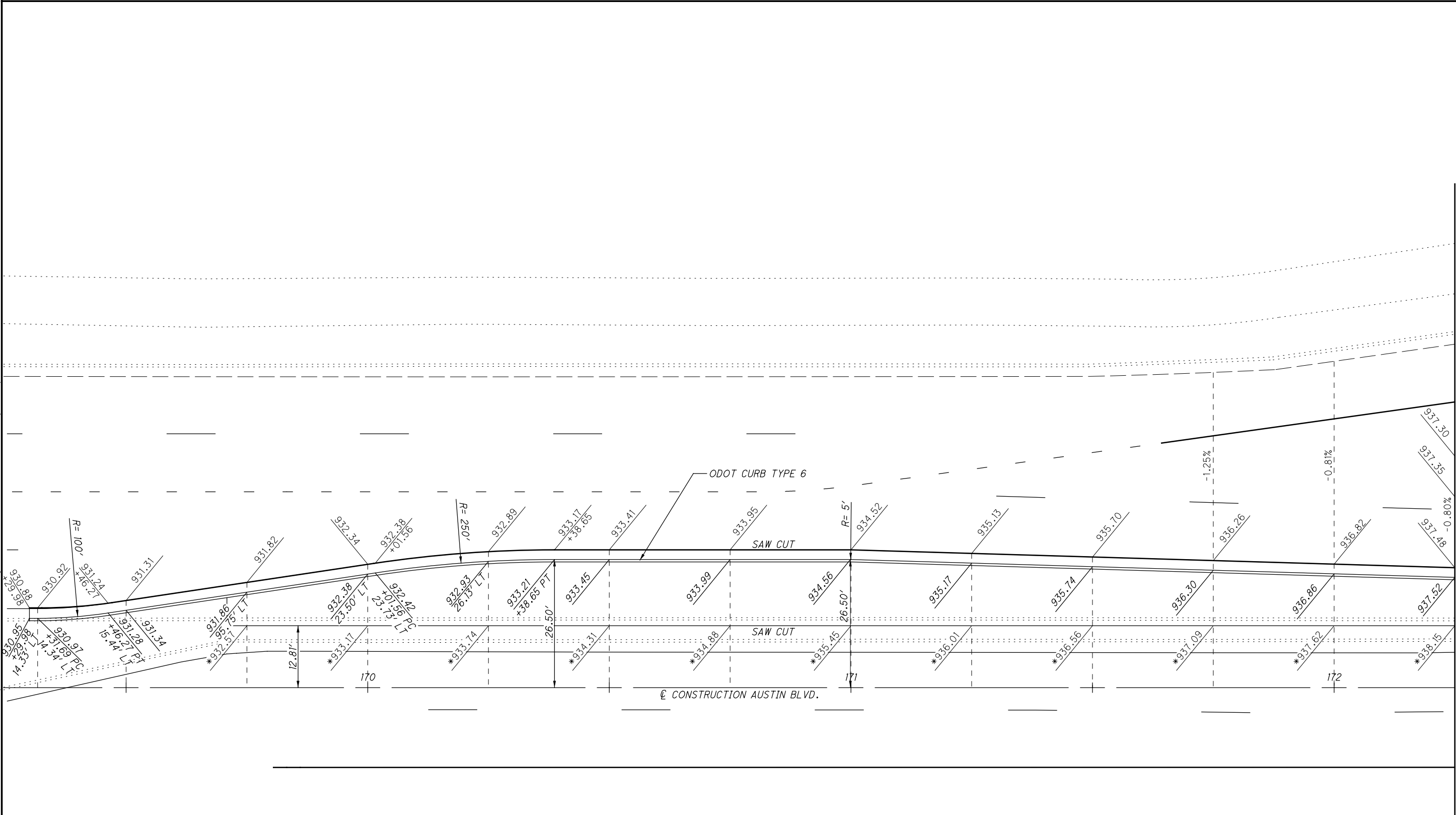




MOT-75-0.76

NOTE: ALL ELEVATIONS ARE PAVEMENT ELEVATIONS
UNLESS OTHERWISE NOTED.

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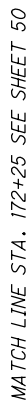


NOTE: ALL ELEVATIONS ARE PAVEMENT ELEVATIONS
UNLESS OTHERWISE NOTED.
* EXISTING ELEVATIONS IN MEDIAN

CALCULATED DJB	CHECKED MAG	INTERSECTION DETAILS AUSTIN BLVD. STA. 169+29.98 TO STA. 172+25.00	MOT-75-0.76	50 106

0 5 10 20
HORIZONTAL
SCALE IN FEET

50
106



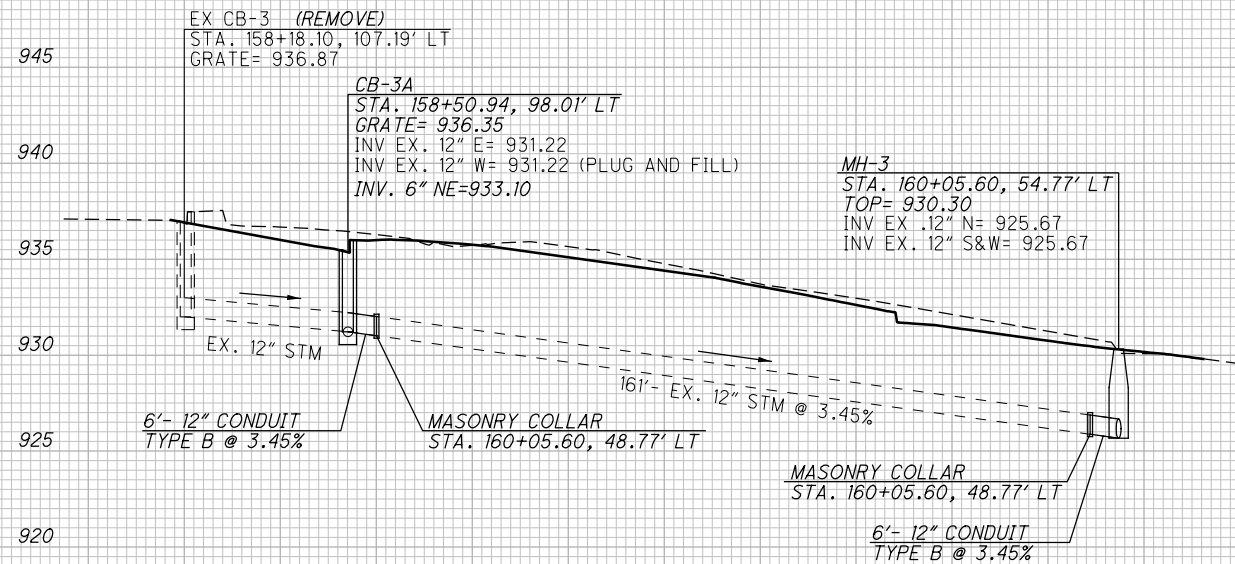
* EXISTING ELEVATIONS IN MEDIAN



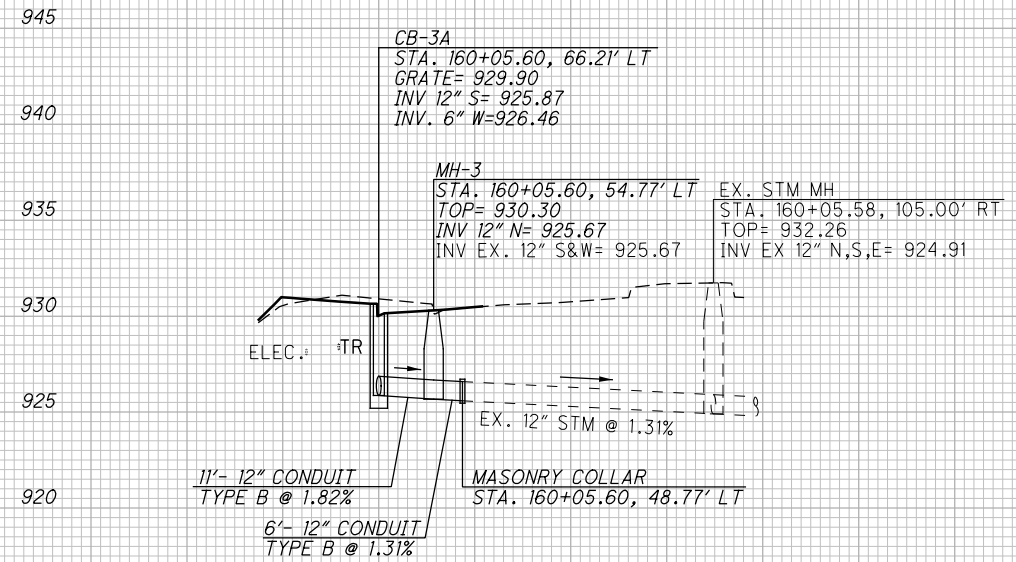
NOTE:
FOR ADJOINING AUSTIN BLVD.
TYPICAL SECTION SEE SHEET 3.

FOR ADJOINING RAMP J
TYPICAL SECTION SEE SHEET 5.

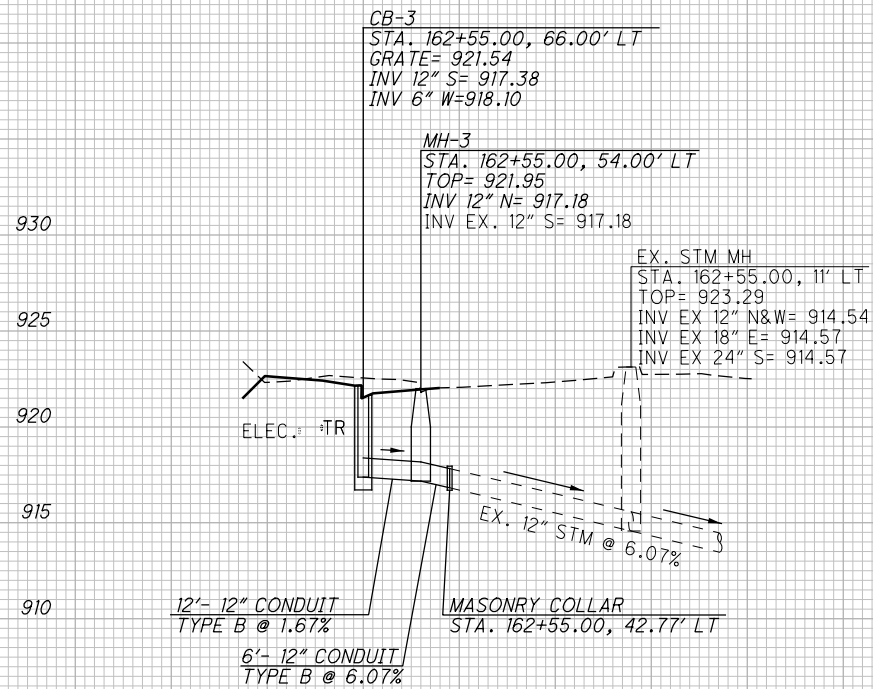
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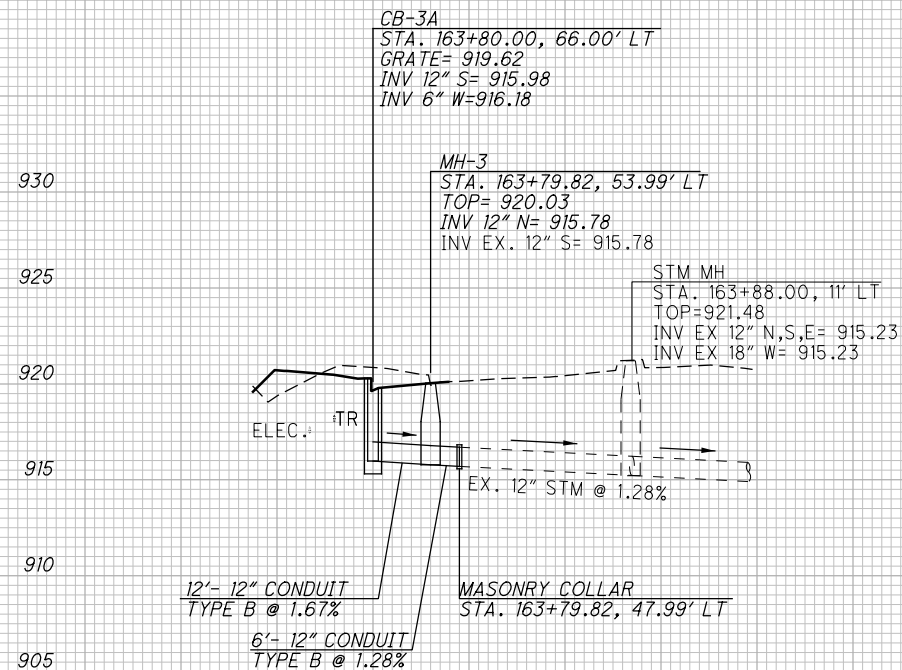
STA. 158+50.94 LT TO STA. 160+05.60 LT



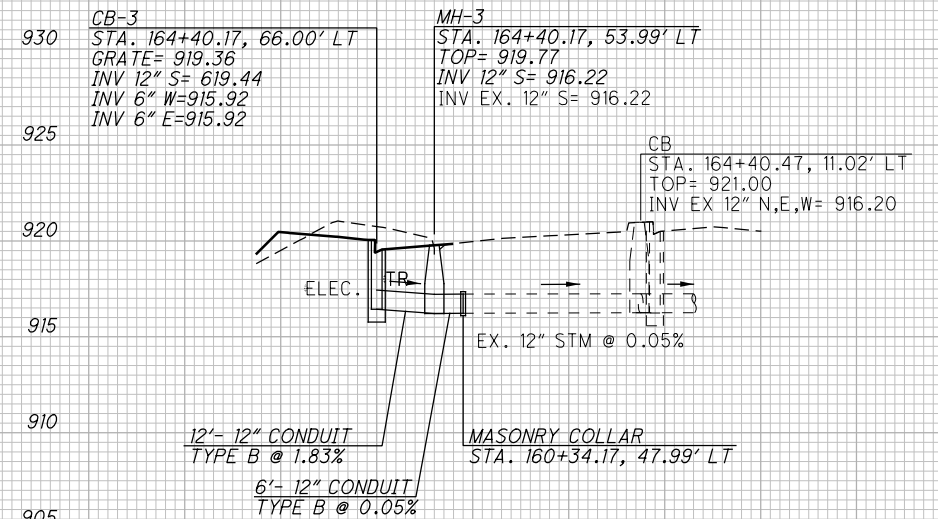
STA. 160+05.60 LT



STA. 162+55.00 LT



STA. 163+80.00 LT



STA. 164+40.17 LT

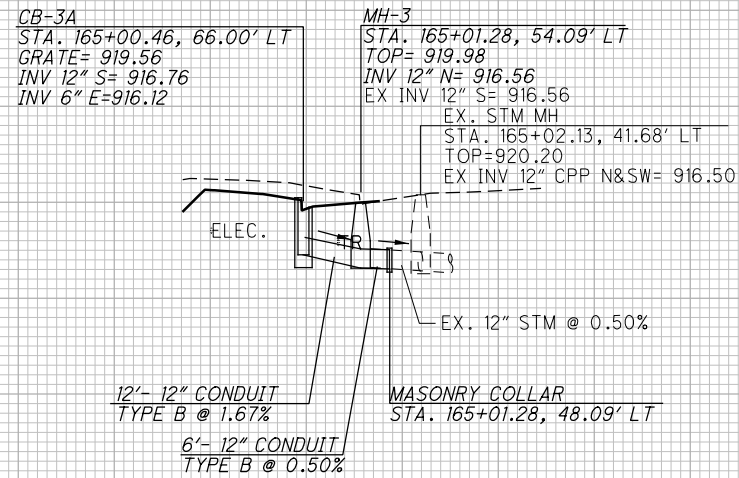
STORM SEWER PROFILES
STA. 158+50.94 TO STA. 164+40.17

MOT-75-0.76

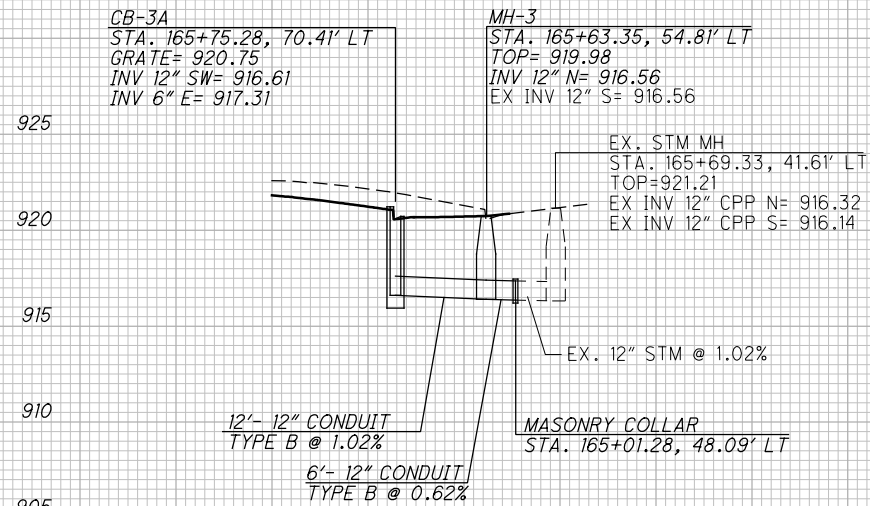
53
106

CALCULATED
DJB
CHECKED
MAG

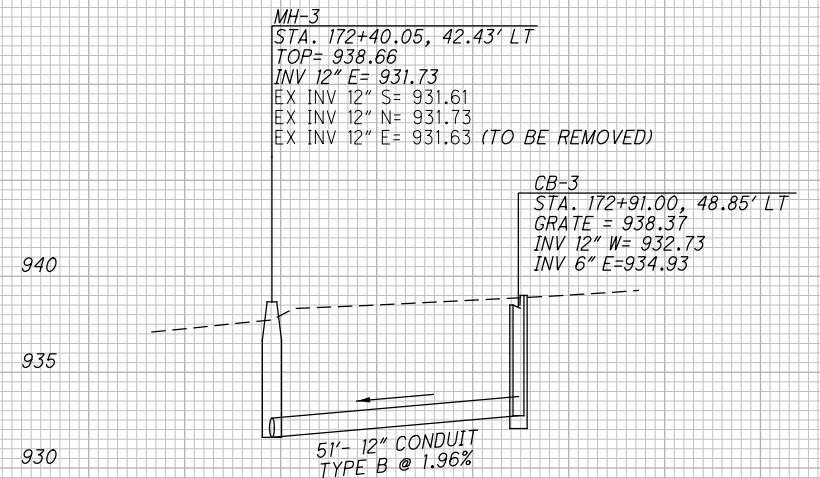
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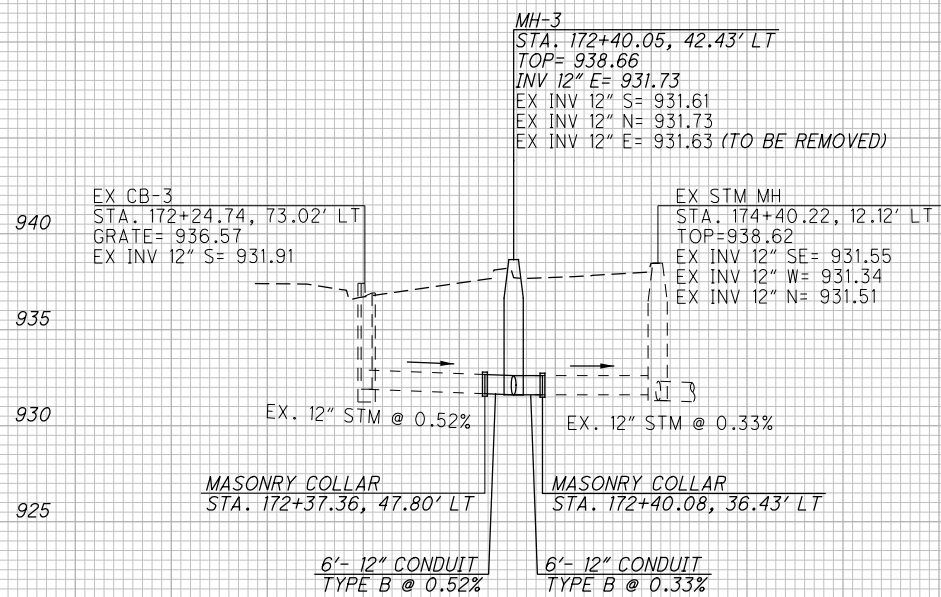
STA. 165+00.46



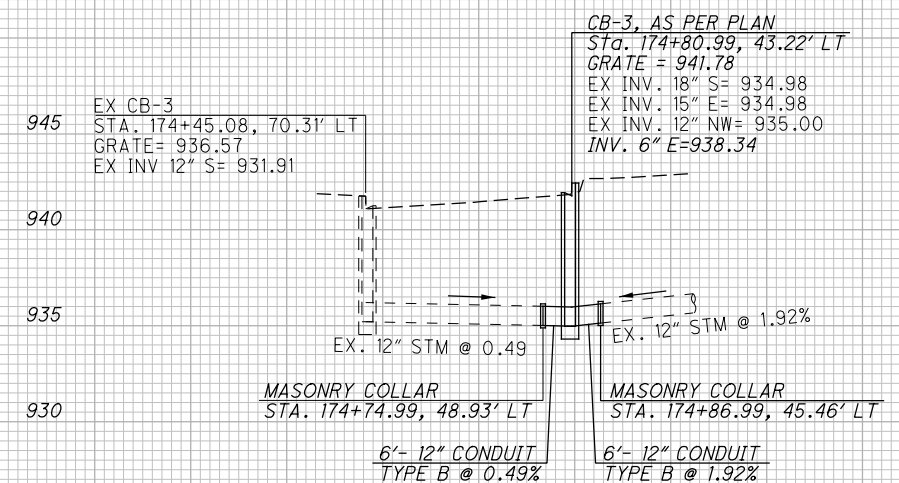
STA. 165+75.28



STA. 172+40.05 LT TO STA. 172+91.00 LT



STA. 172+40.05 LT



STA. 174+80.99 LT

STORM SEWER PROFILES
STA. 165+00.46 TO STA. 174+80.99

MOT-75-0.76

54
106

CALCULATED
DJB
CHECKED
MAG

○

$$\frac{55}{106}$$

$$\frac{56}{106}$$

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REF NO.	SHEET NO.	STATION TO STATION			644	644	644	644	644	644	644	644			646	646	646	646	646	646	646		CALCULATED LAS CHECKED PCG	
					EDGE LINE, 4" (WHITE)	EDGE LINE, 4" (YELLOW)	LANE LINE, 4"	CENTER LINE(DOUBLE SOLID)	CHANNELIZING LINE, 8"	STOP LINE	CROSSWALK LINE	TRANSVERSE/DIAGONAL LINE (YELLOW)	LANE ARROW	DOTTED LINE, 4"		EDGE LINE, 4" (WHITE)	EDGE LINE, 4" (YELLOW)	LANE LINE, 4"	STOP LINE	CROSSWALK LINE	TRANSVERSE/DIAGONAL LINE (WHITE)	CHEVRON MARKING		DOTTED LINE, 4"
					MILE	MILE	MILE	MILE	FT	FT	FT	FT	EACH	FT		MILE	MILE	MILE	FT	FT	FT	FT		FT
			TO																				TRAFFIC CONTROL SUBSUMMARY	
		RAMP																						MOT-75-0.76
L8	61	141+54		144+13																				
Y7	61	157+48		142+08												0.05								
		AUSTIN BLVD																						
O1	61	156+83		142+54									326											
E1	61	158+05		158+11											0.01									
X1	61	157+64		158+72														198						
E2	61	142+84		159+03											0.05									
O2	61	142+54		158+55																		202		
T1	61	142+84		159+03															90					
E3		NOT USED																						
H1	61	158+05		158+50																51				
S1	61	158+29							24															
C2	61	158+11		158+50																				
S2	61	158+50																30		48				
C1	61-62	158+05		163+69				564																
A1	61	158+85											1											
A2	61	158+85											1											
L1	61-62	158+29		165+63			0.14																	
L2	61-62	158+55		165+63			0.14																	
Y1	61-62	158+04		165+63		0.15																		
A3	61	160+61											1											
A4	61	160+61											1											
A5	61	162+38											1											
A6	61	162+38											1											
A7	62	163+26											1											
A8	62	163+26											1											
O3	62	163+69		166+18										270										
X3	62	165+93		166+48																				
X2	62	167+35		167+50						99														
S3	62	167+56								102														
L3	62-63	167+56		169+30			0.04																	
L4	62-63	167+56		170+90			0.07																	
O4	62-63	167+56		171+64										408										
Y2	62-63	167+56		172+98		0.11																		
L6	63-64	171+01		177+38			0.04																	
C3	63-64	171+64		173+58					194															
D1	63	172+37		172+85				0.01																
D2	63	172+37		172+85				0.01																
N1	63	172+37		172+85							16													
S5	63	172+85								24														
Y4	63-64	172+85		177+00																				
E5	63-64	172+85		173+81	0.02	0.08																		
Y3	63	168+97		172+98		0.08																		
A9	63	170+19											1											
A10	63	170+19											1											
A11	63	170+85											1											
A12	63	170+85											1											
					0.02	0.42										0.06	0.05							
TOTALS CARRIED TO GENERAL SUMMARY					0.44		0.43	0.02	758	96	201	16	12	1004			0.11	0.05	0.05	30	246	90	51	202

TRAFFIC CONTROL SUBSUMMARY

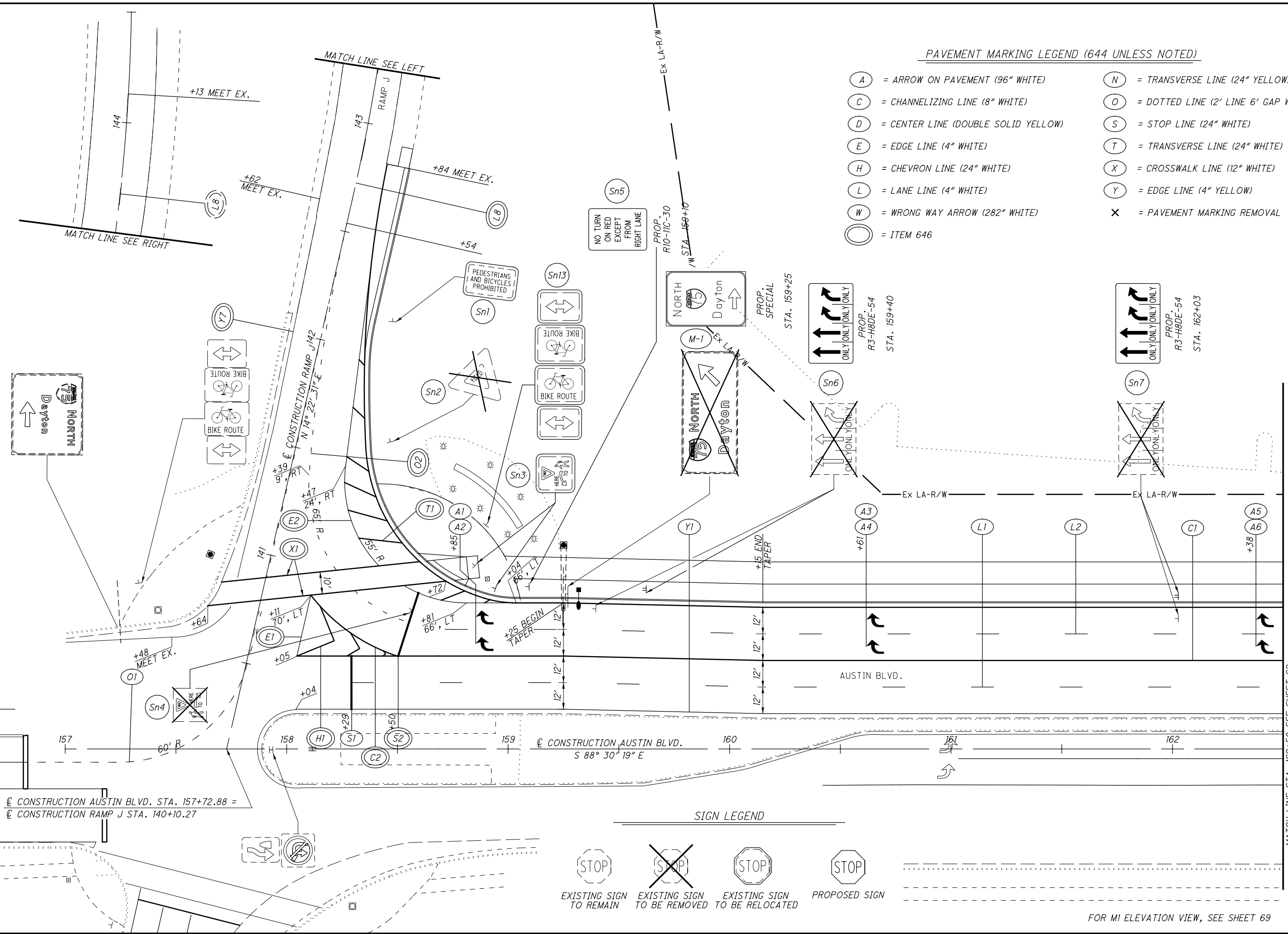
MOT -75 -0.76

$$\frac{58}{106}$$

59
106


$$\frac{60}{106}$$

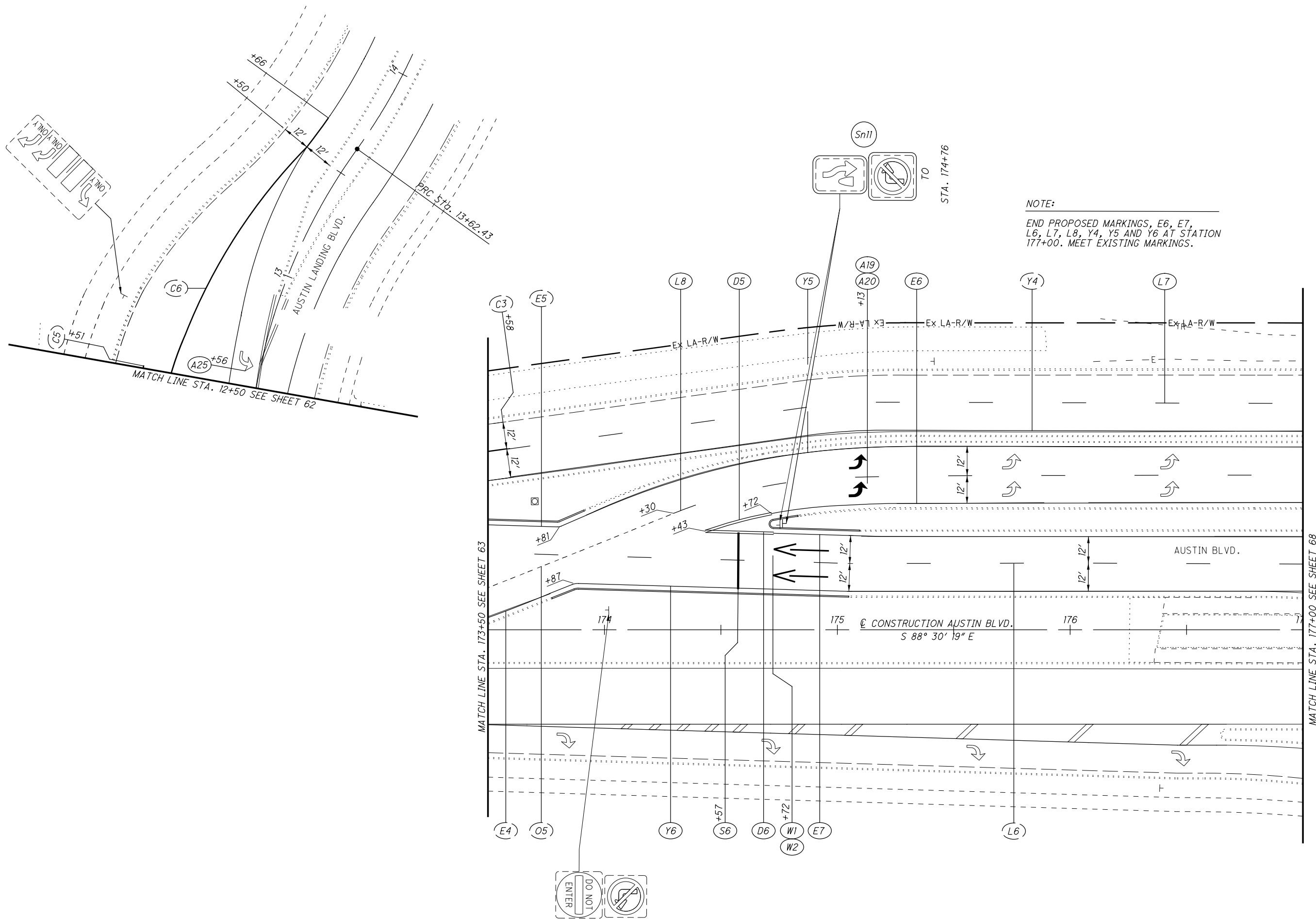
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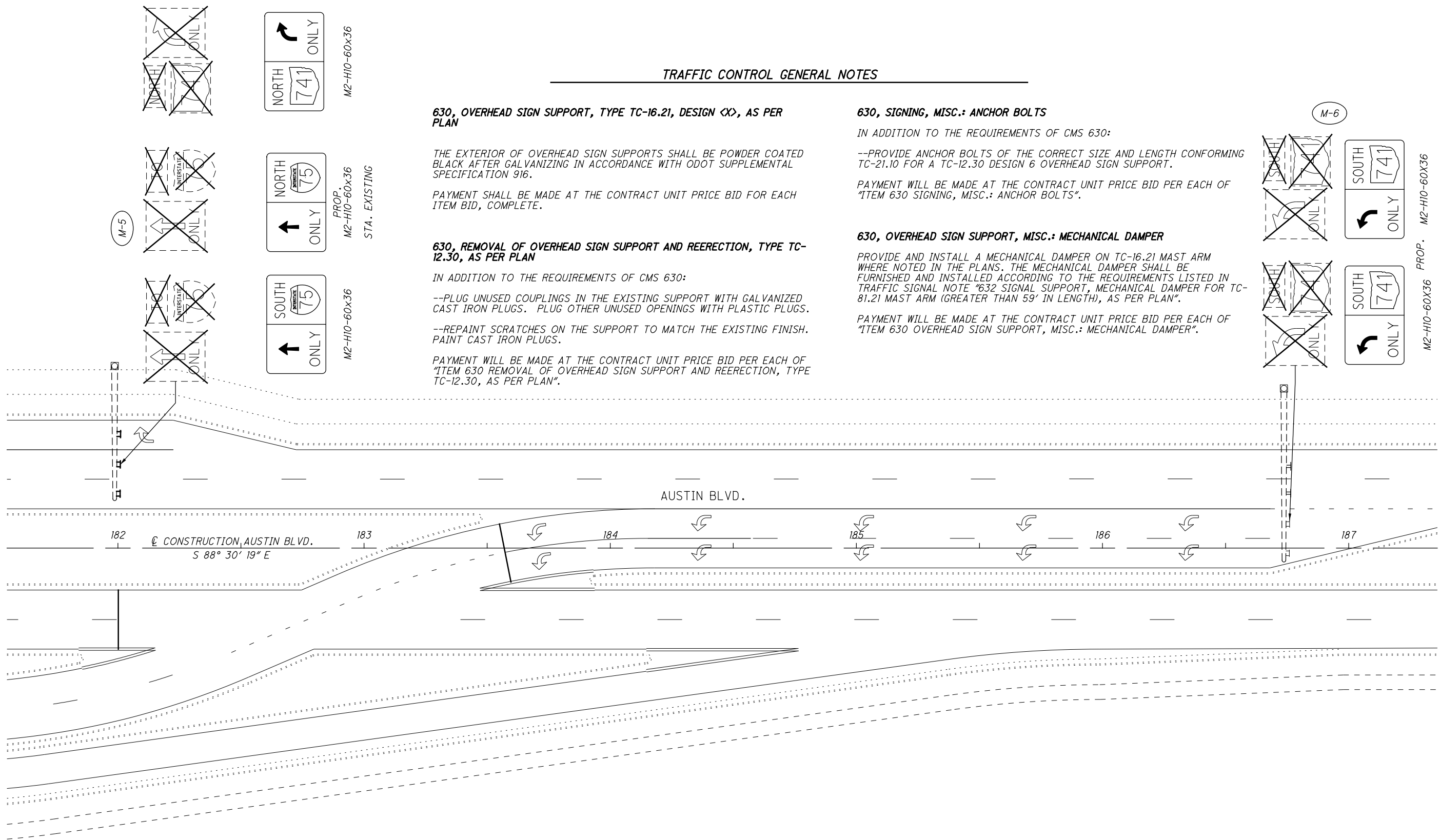
FOR SIGNING AND MARKING LEGENDS,
SEE SHEET 61

FOR M3 ELEVATION VIEW, SEE SHEET 69



FOR SIGNING AND MARKING LEGENDS,
SEE SHEET 61

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TRAFFIC CONTROL GENERAL NOTES

630, OVERHEAD SIGN SUPPORT, TYPE TC-16.21, DESIGN <X>, AS PER PLAN

THE EXTERIOR OF OVERHEAD SIGN SUPPORTS SHALL BE POWDER COATED BLACK AFTER GALVANIZING IN ACCORDANCE WITH ODOT SUPPLEMENTAL SPECIFICATION 916.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR EACH ITEM BID, COMPLETE.

630, REMOVAL OF OVERHEAD SIGN SUPPORT AND REERECTION, TYPE TC-12.30, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 630:

--PLUG UNUSED COUPLINGS IN THE EXISTING SUPPORT WITH GALVANIZED CAST IRON PLUGS. PLUG OTHER UNUSED OPENINGS WITH PLASTIC PLUGS.

--REPAINT SCRATCHES ON THE SUPPORT TO MATCH THE EXISTING FINISH. PAINT CAST IRON PLUGS.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF ITEM 630 REMOVAL OF OVERHEAD SIGN SUPPORT AND REERECTION, TYPE TC-12.30, AS PER PLAN".

630, SIGNING, MISC.: ANCHOR BOLTS

IN ADDITION TO THE REQUIREMENTS OF CMS 630:

--PROVIDE ANCHOR BOLTS OF THE CORRECT SIZE AND LENGTH CONFORMING TC-21.10 FOR A TC-12.30 DESIGN 6 OVERHEAD SIGN SUPPORT.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF ITEM 630 SIGNING, MISC.: ANCHOR BOLTS".

630, OVERHEAD SIGN SUPPORT, MISC.: MECHANICAL DAMPER

PROVIDE AND INSTALL A MECHANICAL DAMPER ON TC-16.21 MAST ARM WHERE NOTED IN THE PLANS. THE MECHANICAL DAMPER SHALL BE FURNISHED AND INSTALLED ACCORDING TO THE REQUIREMENTS LISTED IN TRAFFIC SIGNAL NOTE "632 SIGNAL SUPPORT, MECHANICAL DAMPER FOR TC-81.21 MAST ARM (GREATER THAN 59' IN LENGTH), AS PER PLAN".

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF ITEM 630 OVERHEAD SIGN SUPPORT, MISC.: MECHANICAL DAMPER".

FOR SIGNING AND MARKING LEGENDS,
SEE SHEET 61

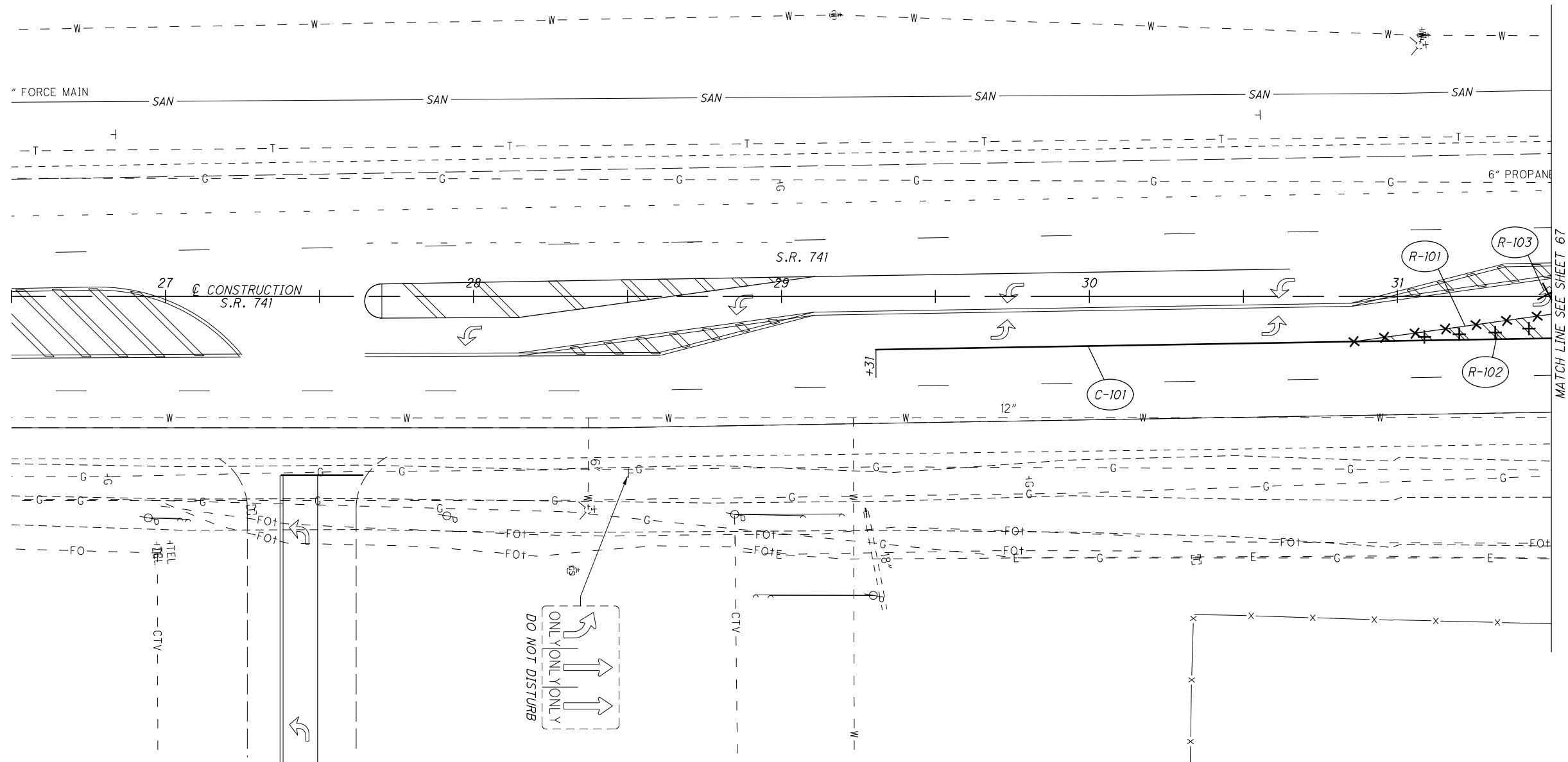


CALCULATED	LAS	CHECKED	PCG
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TRAFFIC CONTROL PLAN / GENERAL NOTES
AUSTIN BLVD.

MOT-75-0.76

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NOTES:

1. PROPOSED LEFT TURN LANE ARROWS SHALL BE CENTERED IN LANE AND ALIGNED LONGITUDINALLY WITH ADJACENT EXISTING LANE ARROWS.
2. PROPOSED LONGITUDINAL MARKINGS SHALL OVERLAY EXISTING MARKINGS WHERE SHOWN.
3. SEE SHEET 61 FOR SIGNING AND MARKING LEGENDS
4. EXISTING SIGNS ONLY SHOWN ON SR-741 NORTHBOUND APPROACH TO AUSTIN BOULEVARD. EXISTING SIGNS THAT ARE NOT SHOWN SHALL NOT BE DISTURBED.

ENGINEERS SEAL:



SIGNED: *Aaron Littman*
DATE: 10/23/2018

MOT-75-0.76

TRAFFIC CONTROL PLAN
S.R. 741

CALCULATED	NDE	CHECKED	ADL


0 20 40
HORIZONTAL
SCALE IN FEET


STA. 34+63, 62.2' RT
TC-16.21 DES. 14 SUPPORT, 70' ARM
WITH DAMPENING DEVICE

SN-101

M2-H10-60

ONLY







SOUTH

M2-H10-60

ONLY






NORTH


R3-5A-30

ONLY




R3-5A-30

ONLY



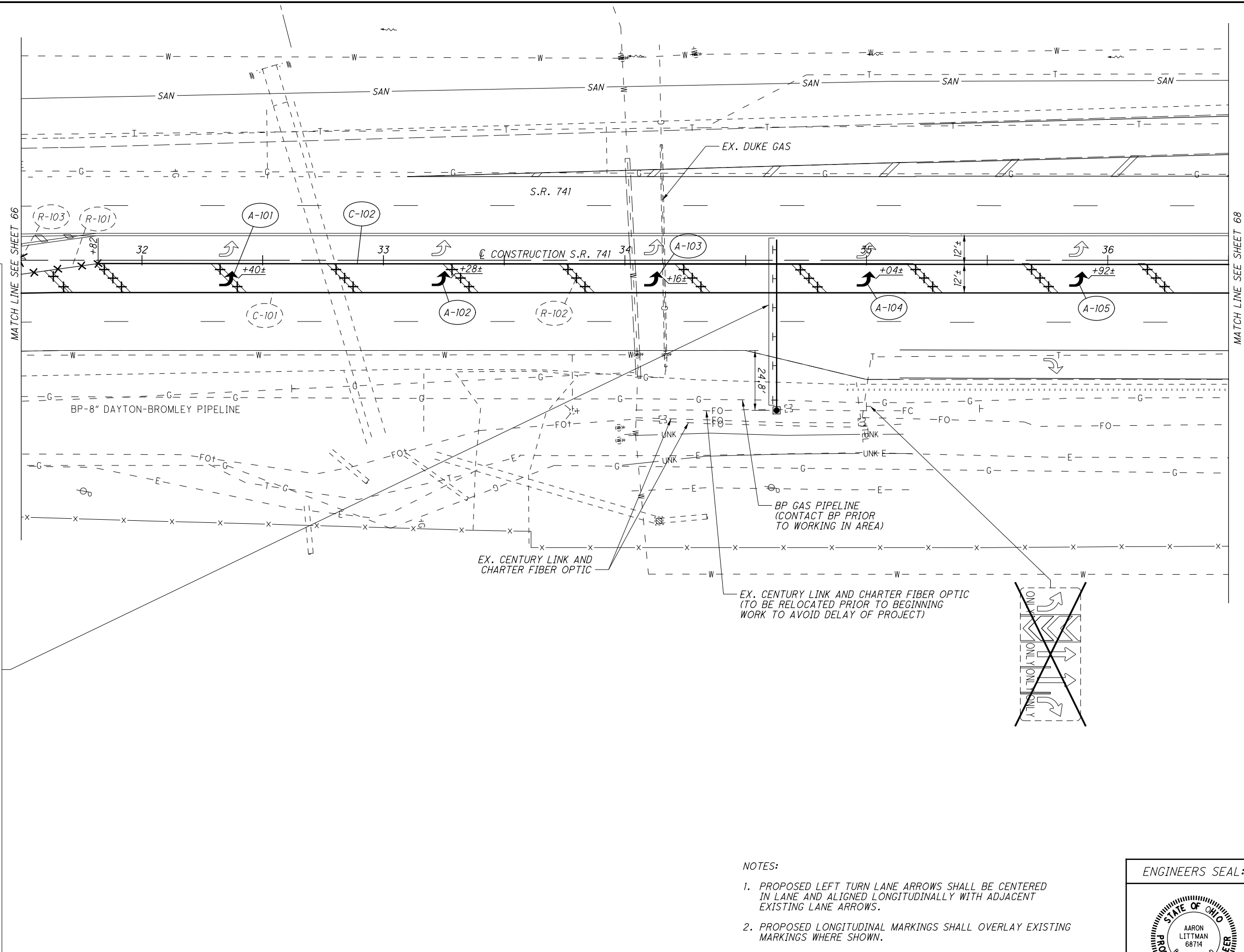
R3-5R-30

ONLY



D3-2-66


Austin Blvd
NEXT SIGNAL



NOTES:

1. PROPOSED LEFT TURN LANE ARROWS SHALL BE CENTERED IN LANE AND ALIGNED LONGITUDINALLY WITH ADJACENT EXISTING LANE ARROWS.
2. PROPOSED LONGITUDINAL MARKINGS SHALL OVERLAY EXISTING MARKINGS WHERE SHOWN.
3. SEE SHEET 61 FOR SIGNING AND MARKING LEGENDS
4. EXISTING SIGNS ONLY SHOWN ON SR-741 NORTHBOUND APPROACH TO AUSTIN BOULEVARD. EXISTING SIGNS THAT ARE NOT SHOWN SHALL NOT BE DISTURBED.

ENGINEERS SEAL:



SIGNED: *Aaron Littman*
DATE: 10/23/2018

MOT-75-0.76

67
106

TRAFFIC CONTROL PLAN
S.R. 741

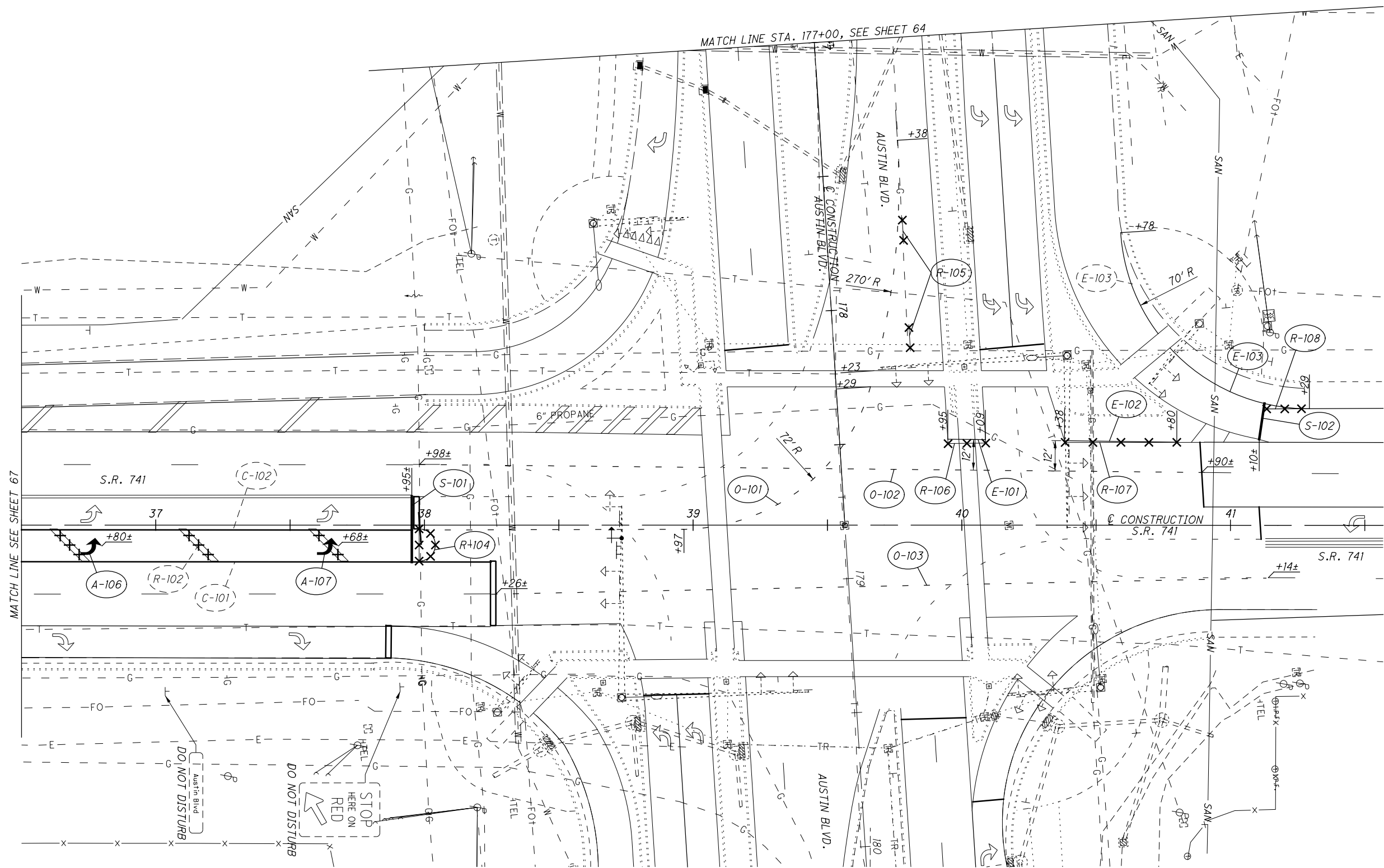
CALCULATED

NDE

CHECKED

ADL


0 20 40
HORIZONTAL
SCALE IN FEET



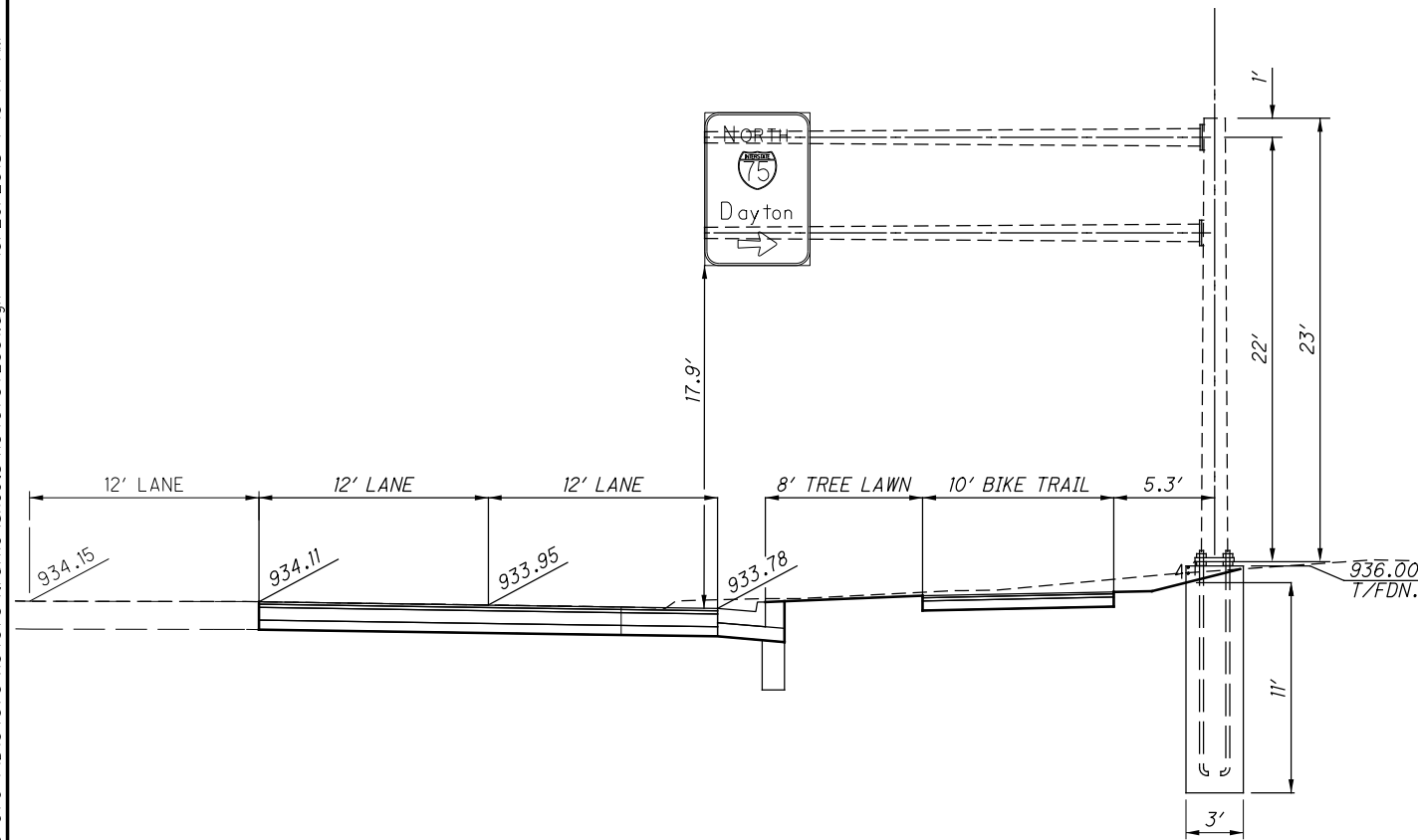
- NOTES:
1. PROPOSED LEFT TURN LANE ARROWS SHALL BE CENTERED IN LANE AND ALIGNED LONGITUDINALLY WITH ADJACENT EXISTING LANE ARROWS.
 2. PROPOSED MARKINGS SHALL OVERLAY EXISTING MARKINGS WHERE SHOWN.
 3. SEE SHEET 61 FOR SIGNING AND MARKING LEGENDS
 4. EXISTING SIGNS ONLY SHOWN ON SR-741 NORTHBOUND APPROACH TO AUSTIN BOULEVARD. EXISTING SIGNS THAT ARE NOT SHOWN SHALL NOT BE DISTURBED.

ENGINEERS SEAL:

STATE OF OHIO
AARON LITTMAN
68714
REGISTERED PROFESSIONAL ENGINEER

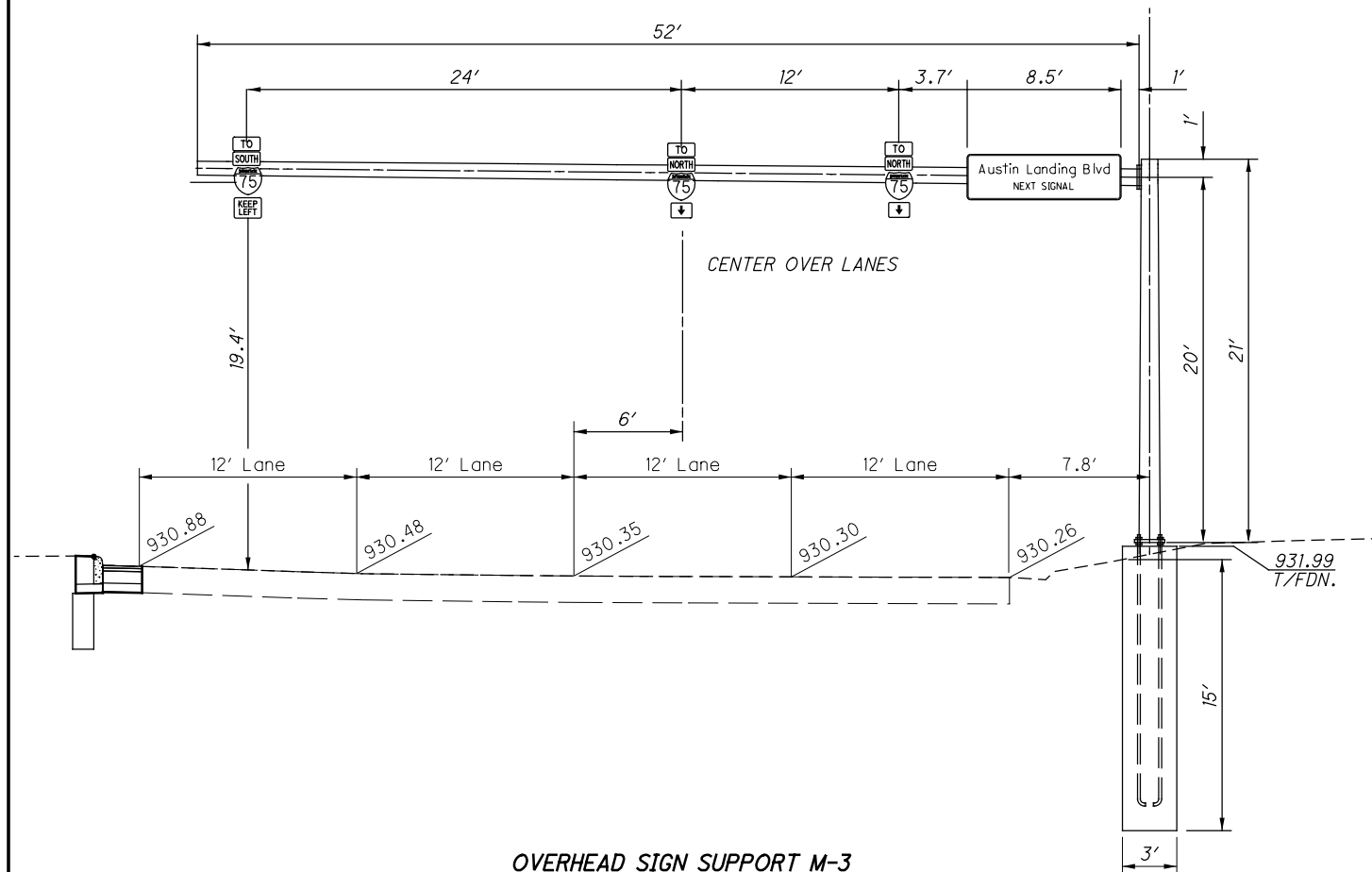
SIGNED: *Aaron Littman*
DATE: 10/23/2018

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OVERHEAD SIGN SUPPORT M-1

STA. 159+25 AUSTIN BLVD.
EX. TC-12.30, DESIGN 6
EX. ARM LENGTH = 26'
DESIGN VERTICAL CLEARANCE :
MIN. = 17'
ACTUAL = 17.94'



OVERHEAD SIGN SUPPORT M-3

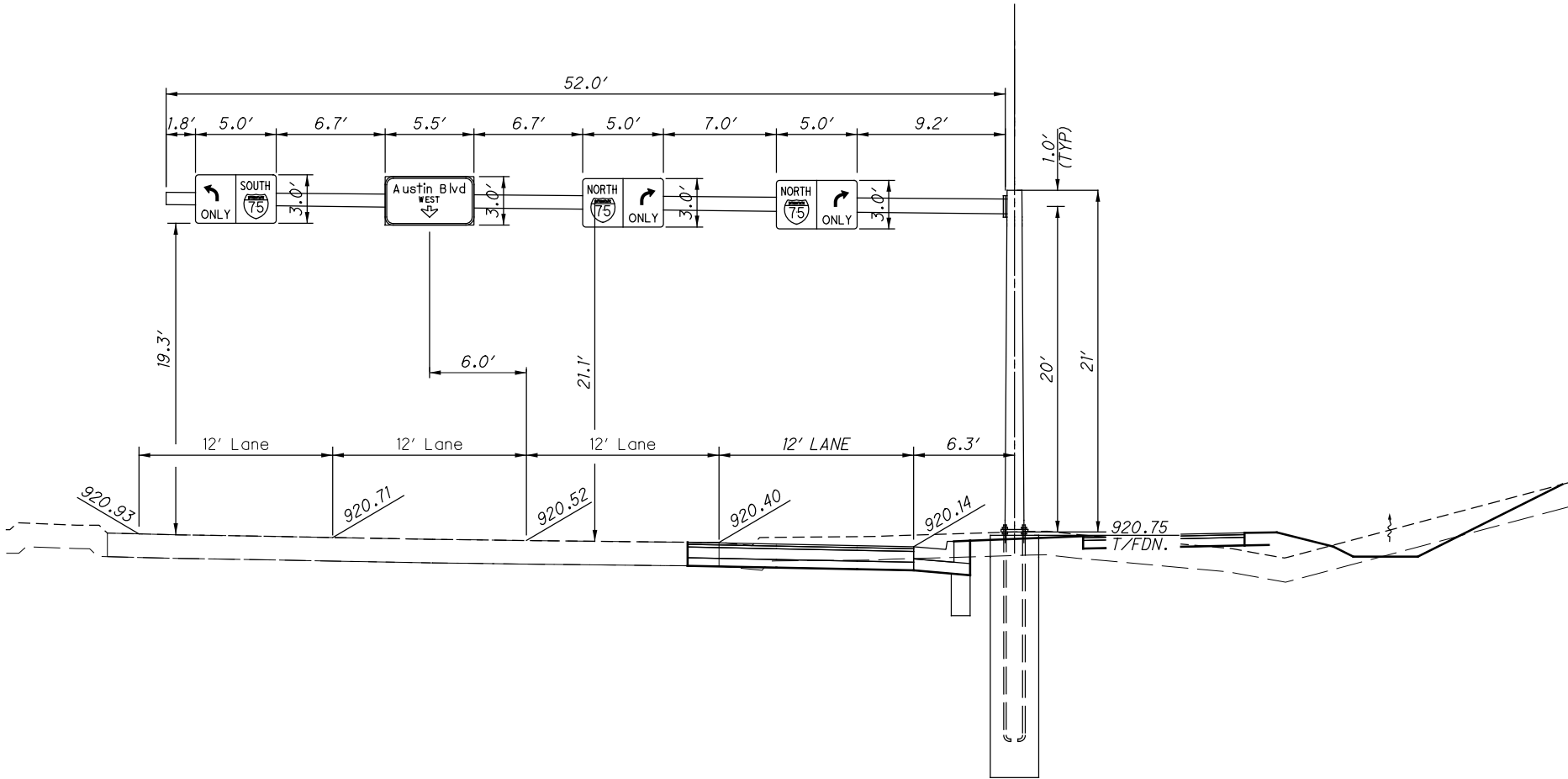
STA. 169+25 AUSTIN BLVD.
TC-16.21 DESIGN 13
ARM LENGTH = 52'
DESIGN VERTICAL CLEARANCE :
MIN. = 17'
ACTUAL = 19.43'

SIGN ELEVATIONS, AUSTIN BOULEVARD
M-1 STA. 159+25, M-3 STA. 169+25

MOT-75-0.76

69
106

CALCULATED
LAS
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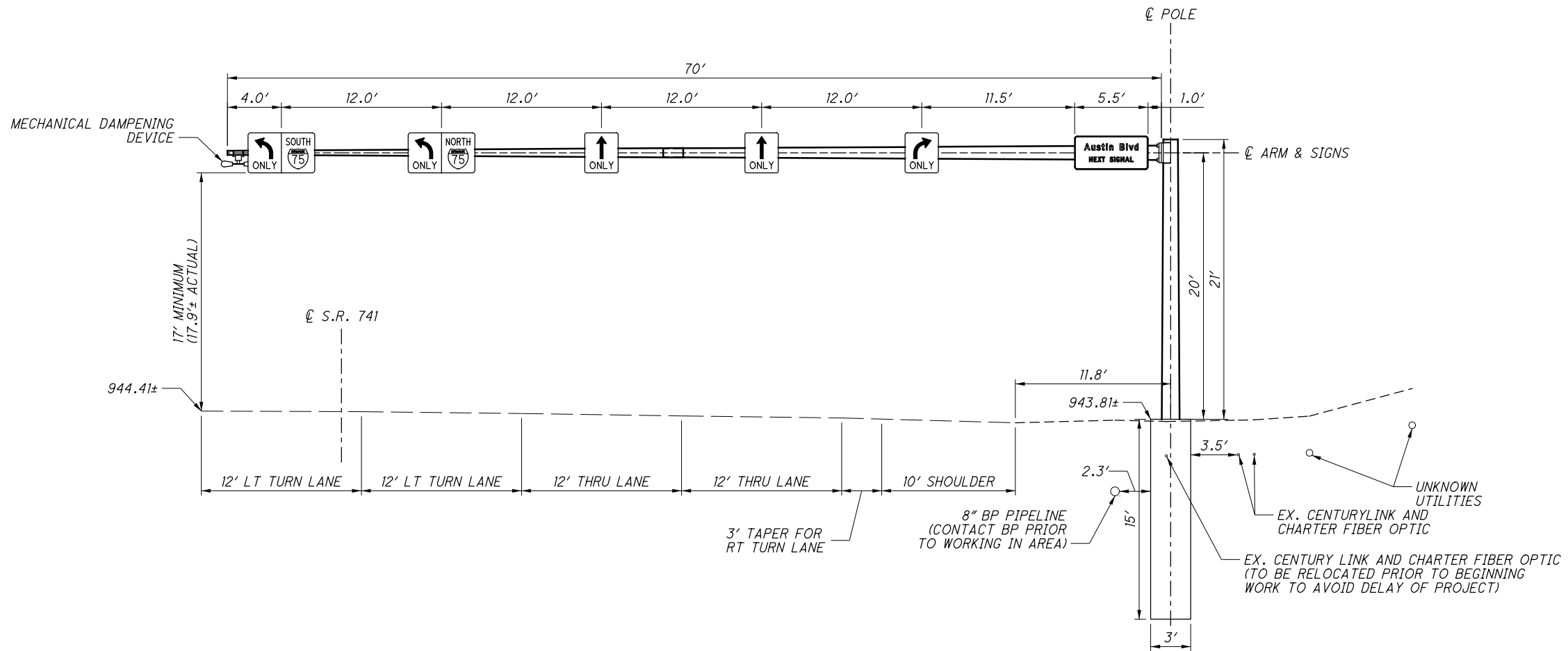


OVERHEAD SIGN SUPPORT M-2

STA. 163+55 AUSTIN BLVD.
TC-16.21, DESIGN 14
ARM LENGTH = 52'
DESIGN VERTICAL CLEARANCE :
MIN. = 17'
ACTUAL = 19.27'

CALCULATED LAS	SIGN ELEVATION, AUSTIN BOULEVARD M-2 STA. 163+55		MOT-75-0.76	70 106
CHECKED PCG				

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PROPOSED SINGLE ARM OVERHEAD SUPPORT

STA. 34+63, 62.2' RT, S.R. 741
SIGN AREA: 66.3 SF
TC-16.21, DESIGN 14 SUPPORT, 70' ARM WITH DAMPENING DEVICE

SN-101

ENGINEERS SEAL:



SIGNED: *Aaron Littman*
DATE: 10/23/2018

MOT-75-0.76

OVERHEAD SIGN ELEVATION
S.R. 741

CALCULATED NDE
CHECKED ADL
0 5 10
2.5
HORIZONTAL
SCALE IN FEET

72
106

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D. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.

E. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.

F. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

2. CONDUITS.

A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.

B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.

C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

3. WIRE FOR GROUNDING AND BONDING.

A. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:

I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.

II. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.

III. USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.

IV. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.

B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.

4. GROUND ROD.

A. A ¾ INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.

B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.

5. THE GREEN CONDUCTOR IN SIGNAL CABLES (CONDUCTOR #4) SHALL NOT BE USED TO SUPPLY POWER TO A SIGNAL INDICATION. IT WILL BE CONNECTED TO THE SIGNAL BODY AS AN EQUIPMENT GROUND IN ALUMINUM HEADS AND IT WILL BE UNUSED IN PLASTIC HEADS. UNUSED CONDUCTORS SHALL BE GROUNDED IN THE CABINET. TYPICAL USE OF CONDUCTORS IS AS FOLLOWS:

COND. NO. COLOR VEHICLE SIGNAL PEDESTRIAN SIGNAL

- 1 BLACK GREEN BALL #1 WALK
- 2 WHITE AC NEUTRAL AC NEUTRAL
- 3 RED RED BALL #1 DW/FDW
- 4 GREEN EQUIPMENT GROUND EQUIPMENT GROUND
- 5 ORANGE YELLOW BALL #2 DW/FDW
- 6 BLUE GREEN ARROW #2 WALK
- 7 WHITE/BLACK STRIPE YELLOW ARROW NOT USED

6. POWER SERVICE AND DISCONNECT SWITCH.

A. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.

B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.

I. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.

II. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.

7. PAYMENT - ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

625, CONDUIT, JACKED OR DRILLED, 725.04, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 625.14, PROVIDE LOCATING AND DEPTH FINDING FOR INTERSECTING UTILITIES AS DIRECTED BY THE ENGINEER. USE A LOW IMPACT SYSTEM SUCH AS A VACUUM / HYDRO TRUCK TO POTHOLE PAVEMENT OR EARTH AREAS. RESTORE PAVED AREAS ACCORDING TO 625.13 USING THE THICKNESS FOR TRENCH IN PAVED AREAS, TYPE B. RESTORE EARTH AREAS BY FILLING THE RESULTING POTHOLE. ENSURE THE RESTORED AREAS ARE SAFE FOR VEHICULAR OR PEDESTRIAN TRAFFIC.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF ITEM 625 CONDUIT, JACKED OR DRILLED, 725.04, AS PER PLAN <BY SIZE>" IN PLACE INCLUDING ALL CONNECTIONS, TESTED AND ACCEPTED.

625, PULL BOX, 725.08, 32", AS PER PLAN

INSTALL 32" ROUND PULL BOX IN ACCORDANCE WITH ODOT SCD ITS-14.11. PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIAL INCLUDING HARDWARE NECESSARY FOR A COMPLETE INSTALLATION.

631, SIGN LIGHTING, MISC.: REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION

CAREFULLY REMOVE AND DISCONNECT THE ELECTRICAL CONNECTIONS TO THE OVERHEAD MOUNTED SIGN ON SUPPORT SP4. STORE THE SIGN AND REERECT ON THE SIGNAL SUPPORT.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR "ITEM 631 SIGN LIGHTING, MISC.: REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION", COMPLETE.

632, REMOVAL OF TRAFFIC SIGNAL INSTALLATION

TRAFFIC SIGNAL INSTALLATIONS, INCLUDING SIGNAL HEADS, CABLE, SIGNAL SUPPORTS, ETC., SHALL BE REMOVED IN ACCORDANCE WITH C&MS 632.26 AND AS INDICATED ON THE PLANS. REMOVED ITEMS SHALL BE REUSED AS PART OF A NEW INSTALLATION ON THE PROJECT OR STORED ON THE PROJECT FOR SALVAGE BY THE MAINTAINING AGENCY IN ACCORDANCE WITH THE LISTING GIVEN HEREIN.

AUSTIN BOULEVARD & I-75 NB RAMPs

ITEMS TO BE REMOVED AND REUSED:

- SIGNAL SUPPORT P2
- VEHICULAR SIGNAL HEADS
- PEDESTRIAN SIGNAL HEAD
- VIDEO DETECTION CAMERA

ITEMS TO BE REMOVED AND DELIVERED:

-DECORATIVE LUMINAIRE

REMOVED ITEMS SHALL BE DELIVERED TO MIAMI TOWNSHIP FACILITY WHOSE ADDRESS IS LISTED BELOW:

MIAMI TOWNSHIP PUBLIC WORKS
10891 WOOD ROAD
MIAMISBURG, OHIO 45342
937-866-4661

AUSTIN BOULEVARD & AUSTIN LANDING BOULEVARD

ITEMS TO BE REMOVED AND REUSED:

- PEDESTRIAN SIGNAL HEAD PHF
- PUSHBUTTON F
- POLE MOUNTED SIGNS SN15, SN18, SN24, AND SN25
- LED BACK LIT SIGN SN22
- VEHICLE SIGNAL HEADS W1 AND W2
- VIDEO DETECTION CAMERA

ITEMS TO BE REMOVED AND DELIVERED:

- SIGNAL SUPPORT SP-1
- OVERHEAD SIGN SN12, SN13
- VEHICLE SIGNAL HEAD W3
- BRACKET ARM

REMOVED ITEMS SHALL BE DELIVERED TO THE FACILITY WHOSE ADDRESS IS LISTED BELOW:

MONTGOMERY COUNTY ENGINEER, OPERATIONS DIVISION
5625 LITTLE RICHMOND ROAD
DAYTON, OHIO 45426
937-837-2528

IN THE EVENT THE ITEMS STORED ON THE PROJECT FOR SALVAGE BY THE LOCAL AGENCY ARE NOT REMOVED, THE CONTRACTOR SHALL, WHEN DIRECTED BY THE ENGINEER IN WRITING, REMOVE AND DISPOSE OF THE ITEMS AT NO ADDITIONAL COST TO THE PROJECT.

632, PEDESTAL, (LENGTH), TRANSFORMER BASE, AS PER PLAN

THE EXTERIOR OF PEDESTALS SHALL BE POWDER COATED BLACK AFTER GALVANIZING IN ACCORDANCE WITH ODOT SUPPLEMENTAL SPECIFICATION 916.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR "ITEM 632 PEDESTAL, (LENGTH), TRANSFORMER BASE, AS PER PLAN", COMPLETE.

632, COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 14, AS PER PLAN

THE EXTERIOR OF SIGNAL SUPPORTS SHALL BE POWDER COATED BLACK AFTER GALVANIZING IN ACCORDANCE WITH ODOT SUPPLEMENTAL SPECIFICATION 916.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR "ITEM 632 COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 14, AS PER PLAN", COMPLETE.

632 SIGNAL SUPPORT, MECHANICAL DAMPER FOR TC-81.21 MAST ARM (GREATER THAN 59' IN LENGTH), AS PER PLAN

THIS ITEM SHALL CONSIST OF THE CONTRACTOR INSTALLING A TUNED MECHANICAL STOCKBRIDGE OR MASS-SPRING TYPE DAMPER ON A TC-81.21 MAST ARM SIGNAL SUPPORT TO REDUCE THE POSSIBILITY OF HARMONIC VIBRATIONS CAUSED BY WIND LOADS. A MECHANICAL DAMPER SHALL BE APPLIED TO ALL MAST ARMS OVER 59 FEET IN LENGTH. THE INSTALLED DAMPER SHALL BE CAPABLE OF REDUCING THE LOADED MAXIMUM VERTICAL MOVEMENT AT THE TIP OF THE ARM TO 8 INCHES MEASURED FROM THE HIGHEST TO THE LOWEST POINT OF DEFLECTION AT WIND SPEEDS OF 5-20 MPH.

ALL ATTACHMENT HARDWARE CONNECTIONS SHALL BE STAINLESS STEEL. STOCKBRIDGE-TYPE DAMPERS SHALL HAVE A STAINLESS-STEEL SAFETY CHAIN ANCHORED TO THE MAST ARM TO PREVENT WEIGHTS FROM FALLING SHOULD THEY BECOME SEPARATED FROM THE REST OF THE ASSEMBLY. THE DAMPER SHALL BE ATTACHED TO THE ARM WITHIN 8 FEET OF MAST ARM TIP. INSTALLATION SHALL BE PER THE MANUFACTURER'S GUIDELINES. STATIC DAMPERS SUCH AS HORIZONTAL FLAT SIGN MOUNTINGS SHALL NOT BE USED. ACCEPTABLE DEVICES INCLUDE THE FOLLOWING OR APPROVED EQUAL:

- 1. UNION METAL ALCOA DAMPER DEVICE - DWG. NO. 2G-1817-C1
- 2. VALMONT STRUCTURES ALCOA DEVICE - DWG. NO. OH104242P1
- 3. VALMONT STRUCTURES MITIGATOR - MODEL TRI
- 4. FLORIDA DOT SPRING-MASS DAMPER - DRAWING INDEX NO. 17749
- 5. PATHMASTER DAMPER ASSEMBLY - DWG. U2G-1817-C
- 6. HUBBELL 607 SERIES DAMPER - MILLERBERND DWG. NO. HUBBELL-6072014

PAYMENT FOR ITEM 632 "SIGNAL SUPPORT, MECHANICAL DAMPER FOR TC-81.21 MAST ARM (GREATER THAN 59 FEET IN LENGTH), AS PER PLAN" SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH COMPLETE AND IN PLACE, AND SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK.

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632, SIGNAL SUPPORT, MISC.: ANCHOR BOLTS

--PROVIDE ANCHOR BOLTS OF THE CORRECT SIZE AND LENGTH CONFORMING TC-21.10 FOR A TC-81.21 DESIGN 14 SIGNAL SUPPORT.

--VERIFY THE DIAMETER OF THE ANCHOR BOLT WITH THE EXISTING CUSTOM SIGNAL SUPPORT TO BE RELOCATED.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF "ITEM 632 SIGNAL SUPPORT, MISC.: ANCHOR BOLTS".

625, BRACKET ARM, 10', AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 625 POWDER COAT THE EXTERIOR OF BRACKET ARMS BLACK AFTER GALVANIZING IN ACCORDANCE WITH ODOT SUPPLEMENTAL SPECIFICATION 916.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR "ITEM 625 BRACKET ARM, 10', AS PER PLAN", COMPLETE.

632, VEHICULAR SIGNAL HEAD, (LED), (BY TYPE), AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 632 AND 732, THE FOLLOWING REQUIREMENTS SHALL APPLY:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC WITH VISORS AS SPECIFIED AND MEET ITE SPECIFICATIONS.

2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.

3. ALL UPPER SIGNAL SUPPORT HARDWARE AND PIPING UP TO AND INCLUDING THE WIRE INLET FITTING SHALL BE FERROUS METAL.

4. THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.

5. ALL SIGNAL HEADS SHALL BE RIGIDLY MOUNTED TO THE MAST ARM WITH THE YELLOW MODULE LOCATED IN FRONT OF THE MAST ARM.

6. ALUMINUM BACKPLATES SHALL BE IN ACCORDANCE WITH THE C&MS AND INCLUDE A FLUORESCENT YELLOW REFLECTIVE BORDER.

7. THE LIGHT EMITTING DIODE (LED) MODULES SHALL MEET THE REQUIREMENTS OF C&MS 732.04-C. THE CONTRACTOR SHALL PROVIDE ODOT, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.

8. SIGNAL HEADS SHALL HAVE A MINIMUM WALL THICKNESS OF 0.117 INCHES.

9. SIGNAL HEADS SHALL INCLUDE CUTAWAY TYPE VISORS UNLESS OTHERWISE SPECIFIED IN THE PLANS.

10. APPLY A BEAD OF SILICONE TO THE SIGNAL HEAD, WASHER, AND ENTRANCE ADAPTER SERRATIONS TO PREVENT WATER INTRUSION. ALSO, FILL THE SPACE BETWEEN CONCENTRIC SERRATION RINGS ON THE TOP OF THE SIGNAL HEAD TO COMPLETELY EXCLUDE WATER FROM THE SPACE BETWEEN THE CONCENTRIC RINGS.

11. FIELD DRILL EXISTING OR RELOCATED SIGNAL SUPPORTS TO PROVIDE THE PROPER CABLE PATH AND MOUNTING OF SIGNAL HEADS AS SHOWN ON TC-85.20.

PAYMENT FOR "ITEM 632 VEHICULAR SIGNAL HEAD, LED, (BY TYPE), AS PER PLAN" SHALL BE MADE FOR COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, AND NEW ATTACHMENT HARDWARE.

632, COVERING OF VEHICULAR SIGNAL HEAD

COVER VEHICULAR SIGNAL HEADS IF ERECTED AT INTERSECTIONS WHERE TRAFFIC IS MAINTAINED BEFORE ENERGIZING THE SIGNALS. USE A STURDY OPAQUE COVERING MATERIAL SPECIFICALLY MADE FOR USE WITH TRAFFIC SIGNALS, AND ENSURE THAT THE COLOR OF THE COVER IS DIFFERENT THAN THE SIGNAL HEAD, TAN OR BEIGE, SO THAT IT IS CLEAR TO DRIVERS THE HEADS ARE COVERED, NOT DARK. USE A METHOD OF COVERING TO COVER ATTACHMENT AND MATERIALS, INCLUDING BACKPLATES, AS APPROVED BY THE ENGINEER. COVERS ARE TO BE FREE OF TEXT, PICTURES, OR ANY TYPE OF ADVERTISING. MAINTAIN COVERS, AND REMOVE THEM WHEN DIRECTED BY THE ENGINEER.

632, VEHICULAR SIGNAL HEAD, MISC.: RELOCATION OF EXISTING VEHICULAR SIGNAL HEAD

THIS ITEM SHALL INCLUDE ALL COORDINATION, HARDWARE, CONNECTORS, TROUBLESHOOTING AND RESOLUTION NECESSARY TO REMOVE AND RELOCATE AN EXISTING VEHICULAR SIGNAL HEAD AS INDICATED IN THE PLANS.

EXISTING SIGNAL CABLE CONNECTING THE CONTROLLER CABINET TO THE EXISTING VEHICULAR SIGNAL HEADS SHALL BE REUSED BY THE CONTRACTOR AS SHOWN IN THE PLANS. UNUSED OR EXCESS SIGNAL CABLE SHALL BE REMOVED.

ALL EXPOSED PORTIONS OF MOUNTING HARDWARE SHALL BE PAINTED TO MATCH THE EXISTING SIGNAL SUPPORT.

WHERE THE EXISTING SIGNAL CABLE IS NOT SUFFICIENT NEW SIGNAL CABLE SHALL BE INSTALLED CONNECTING THE RELOCATED VEHICULAR SIGNAL HEADS TO THE CONTROLLER AS SHOWN IN THE PLANS. NO SPLICES WILL BE PERMITTED. ANY PROPOSED SIGNAL CABLE IS INCLUDED AS A PART OF ITEM 632, SIGNAL CABLE, 7-CONDUCTOR, NO. 14 AWG AND IS PAID FOR SEPARATELY.

EXISTING VEHICULAR SIGNAL HEADS TO BE RELOCATED SHALL BE RE-LAMPED. NEW LAMPS SHALL MATCH EXISTING LAMPS AND SHALL CONFORM TO CMS ITEM 732.04.

FIELD DRILL EXISTING OR RELOCATED SIGNAL SUPPORTS TO PROVIDE THE PROPER CABLE PATH AND MOUNTING OF SIGNAL HEADS AS SHOWN ON TC-85.20.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF "ITEM 632, VEHICULAR SIGNAL HEAD, MISC.: RELOCATION OF EXISTING VEHICULAR SIGNAL HEAD".

632, REUSE OF SIGNAL SUPPORT, AS PER PLAN

THE INTENT OF THIS ITEM IS TO RELOCATE AN EXISTING SIGNAL SUPPORT IN A DIFFERENT ORIENTATION. IN ADDITION TO THE REQUIREMENTS OF CMS 632.27:

--PLUG UNUSED COUPLINGS IN THE EXISTING SUPPORT WITH GALVANIZED CAST IRON PLUGS. PLUG OTHER UNUSED OPENINGS WITH PLASTIC PLUGS.

--REPAINT SCRATCHES ON THE SUPPORT TO MATCH THE EXISTING FINISH. REPAINT CAST IRON PLUGS.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF "ITEM 632 REUSE OF SIGNAL SUPPORT, AS PER PLAN".

633, CONTROLLER ITEM, MISC.: ADD PHASES

IN ADDITION TO THE REQUIREMENTS OF CMS 632.27:

THE CONTRACTOR SHALL REUSE AND REVISE THE EXISTING CONTROLLER, CABINET, AND MISCELLANEOUS TRAFFIC CONTROL ITEMS WITHIN THE CABINET AT THE INTERSECTION OF NORTHBOUND I-75 RAMPS AND AUSTIN BOULEVARD. THE WORK WILL INCLUDE BUT IS NOT LIMITED TO THE ADDITION OF A VEHICLE PHASE, AN ACTUATED PEDESTRIAN PHASE, REWIRING OF SIGNAL CABLES, LOADING REVISED SIGNAL TIMINGS, PROVIDING LOAD SWITCHES, REPROGRAMMING OF THE MALFUNCTION MANAGEMENT UNIT, WIRING HARNESS MODIFICATIONS AND OTHER CABINET ALTERATIONS.

PROVIDE CABINET DRAWINGS PLACE THEM IN THE TRAFFIC SIGNAL CABINET. PROVIDE A PDF FORMAT OF THE CABINET DRAWINGS TO THE DISTRICT SEVEN TRAFFIC ENGINEER.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF "ITEM 633, CONTROLLER ITEM, MISC.: ADD PHASES" IN PLACE INCLUDING ALL CONNECTIONS, TESTED AND ACCEPTED.

633, CONTROLLER ITEM, MISC.: LOAD SYSTEM TIMINGS

ENTER THE PROVIDED SIGNAL SYSTEM TIMINGS INTO THE EXISTING CONTROLLER.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER 72 HOURS BEFORE ACTIVATING THE REVISED SIGNAL TIMINGS.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF "ITEM 633, CONTROLLER ITEM, MISC.: LOAD SYSTEM TIMINGS".

804, FIBER OPTIC CABLE, 24 FIBER, AS PER PLAN

THIS PROJECT INCLUDES AN ESTIMATED QUANTITY OF THIS CONTINGENCY ITEM FOR USE AS DIRECTED BY THE ENGINEER. IF THE EXISTING FIBER OPTIC CABLE CANNOT BE REUSED DUE TO A PRE-EXISTING CONDITION, THE CONTRACTOR SHALL FURNISH AND INSTALL NEW FIBER OPTIC CABLE, EVIDENCE OF THE PRE-EXISTING CONDITION AND NEED TO UTILIZE THIS CONTINGENCY ITEM SHALL BE PRESENTED IN WRITING TO THE ENGINEER FOR APPROVAL.

REMOVAL OF THE EXISTING CABLE AND DISPOSAL AND FIBER OPTIC SPLICES ASSOCIATED WITH CONNECTING THE NEW CABLE AS SHOWN IN THE PLANS ARE INCIDENTAL TO THIS PAY ITEM. PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF FIBER OPTIC CABLE, 24 FIBER, AS PER PLAN IN PLACE INCLUDING CONNECTIONS, TESTED AND ACCEPTED.

804, FIBER OPTIC CABLE, MISC.: REUSE EXISTING CABLE

THE CONTRACTOR SHALL DISCONNECT AND PULL BACK THE EXISTING UNDERGROUND FIBER OPTIC INTERCONNECT CABLE BACK TO THE NEAREST PULL BOX, USING PROPER STORAGE AND HANDLING TECHNIQUES, TO SAFELY STORE THE CABLE IN A LOCATION NOT IMPACTED BY PROJECT CONSTRUCTION FROM WHICH IT CAN THEN BE REINSTALLED AND CONNECTED TO THE PROPOSED EQUIPMENT VIA THE PROPOSED PATHWAY AS SPECIFIED IN THESE PLANS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR WEATHERPROOFING THE EXPOSED END(S) OF THE FIBER OPTIC CABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF THE EXISTING INTERCONNECT CABLE SUCH THAT NO DAMAGE OCCURS TO IT PHYSICALLY OR FUNCTIONALLY. SHOULD ANY DAMAGE OCCUR, THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND INCUR THE EXPENSE OF ANY ALL NECESSARY CORRECTIVE ACTIONS, INCLUDING BUT NOT LIMITED TO REPLACING THE EXISTING EQUIPMENT AND CABLE TO THE NEAREST SPLICE OR SIMILAR POINT WHERE THE FIBER OPTIC CABLE CONNECTION IS INTERRUPTED.

THE INSTALLATION OF THE EXISTING CABLE VIA THE NEW PATHWAY AND THE FIBER OPTIC SPLICES ASSOCIATED WITH RECONNECTING THE EXISTING CABLE AS SHOWN IN THE PLANS ARE INCIDENTAL TO THIS PAY ITEM.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF ITEM 804 FIBER OPTIC CABLE, MISC.: REUSE EXISTING CABLE IN PLACE INCLUDING CONNECTIONS, TESTING AND ACCEPTED.

804, FIBER OPTIC CABLE TESTING, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 804.13, THE FOLLOWING REQUIREMENTS ARE ESTABLISHED:

AS-BUILT DOCUMENTATION

WHILE INSTALLING AND TESTING THE INSTALLATION, THE CONTRACTOR IS TO MARK PRINTS WITH ANY FIELD CHANGES THAT WERE INITIATED DURING CONSTRUCTION. THESE ARE COMMONLY REFERRED TO AS "AS-BUILTS".

AS-BUILT DOCUMENTATION SHALL INCLUDE THE FOLLOWING INFORMATION:

1. PLAN SHEETS WITH THE LOCATION OF CONDUIT IN ROADWAY HAND MARKED.
2. PLAN SHEETS WITH THE SIZES OF CONDUIT HAND MARKED.
3. PLAN SHEETS WITH THE LOCATIONS OF ALL PULL BOXES AND SPLICES HAND MARKED.
4. PLAN SHEETS WITH THE SIZES OF FIBER OPTIC CABLES HAND MARKED.
5. REVISED SPLICE DIAGRAMS HAND MARKED.
6. FOR NEW CABLE, THE PRE-INSTALLATION, ON-REEL ATTENUATION LOSS OTDR TRACES OF EACH CABLE FIBER IN DB/KM SHOWING CABLE/SHEATH LENGTH (NOT OPTICAL FIBER LENGTH), 2-POINT DB LOSS, ATTENUATION IN DB/KM, FIBER TYPE, WAVELENGTH USED, PULSE WIDTH SELECTION, AND FIBER/CABLE IDENTIFICATION. OTDR TRACES SHALL BE HARD COPY AND ELECTRONIC.
7. THE INSTALLED ATTENUATION LOSS OTDR TRACES OF EACH CABLE FIBER IN DB/KM SHOWING CABLE/SHEATH LENGTH (NOT OPTICAL FIBER LENGTH), 2-POINT DB LOSS, ATTENUATION IN DB/KM, FIBER TYPE, WAVELENGTH USED, PULSE WIDTH SELECTION, AND FIBER/CABLE IDENTIFICATION. OTDR TRACES SHALL BE HARD COPY AND ELECTRONIC.

ALL COSTS TO PERFORM THE ABOVE TESTING AND DOCUMENTATION SHALL BE INCLUDED IN THE BID LUMP SUM PRICE FOR ITEM 804 FIBER OPTIC CABLE TESTING, AS PER PLAN. ANY LINK THAT FAILS THE ABOVE TESTS SHALL BE RESPLICED OR REPLACED UNTIL THESE REQUIREMENTS ARE MET. THE COST OF RESPLICING, REPLACING AND RETESTING CABLE IS AT THE CONTRACTOR'S EXPENSE.

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816, VIDEO DETECTION SYSTEM, AS PER PLAN

REUSE THE EXISTING VIDEO DETECTION CAMERA PER CMS 632.27.

PROVIDE NEW VIDEO DETECTION CABLE FROM THE CAMERA BACK TO THE CONTROLLER.

PROVIDE A NEW MOUNTING BRACKET TO MOUNT THE CAMERA TO THE SIGNAL SUPPORT.

PAINT THE MOUNTING HARDWARE TO MATCH THE SIGNAL SUPPORT.

CLEAN AND REPAIR THE CAMERA TO ENSURE IT IS IN GOOD SERVICEABLE CONDITION.

RE-AIM THE VIDEO DETECTION CAMERA PER ITEM 816 TO REESTABLISH THE EXISTING NORTHBOUND RAMP DETECTION ZONES.

FIELD DRILL THE EXISTING SIGNAL SUPPORT.

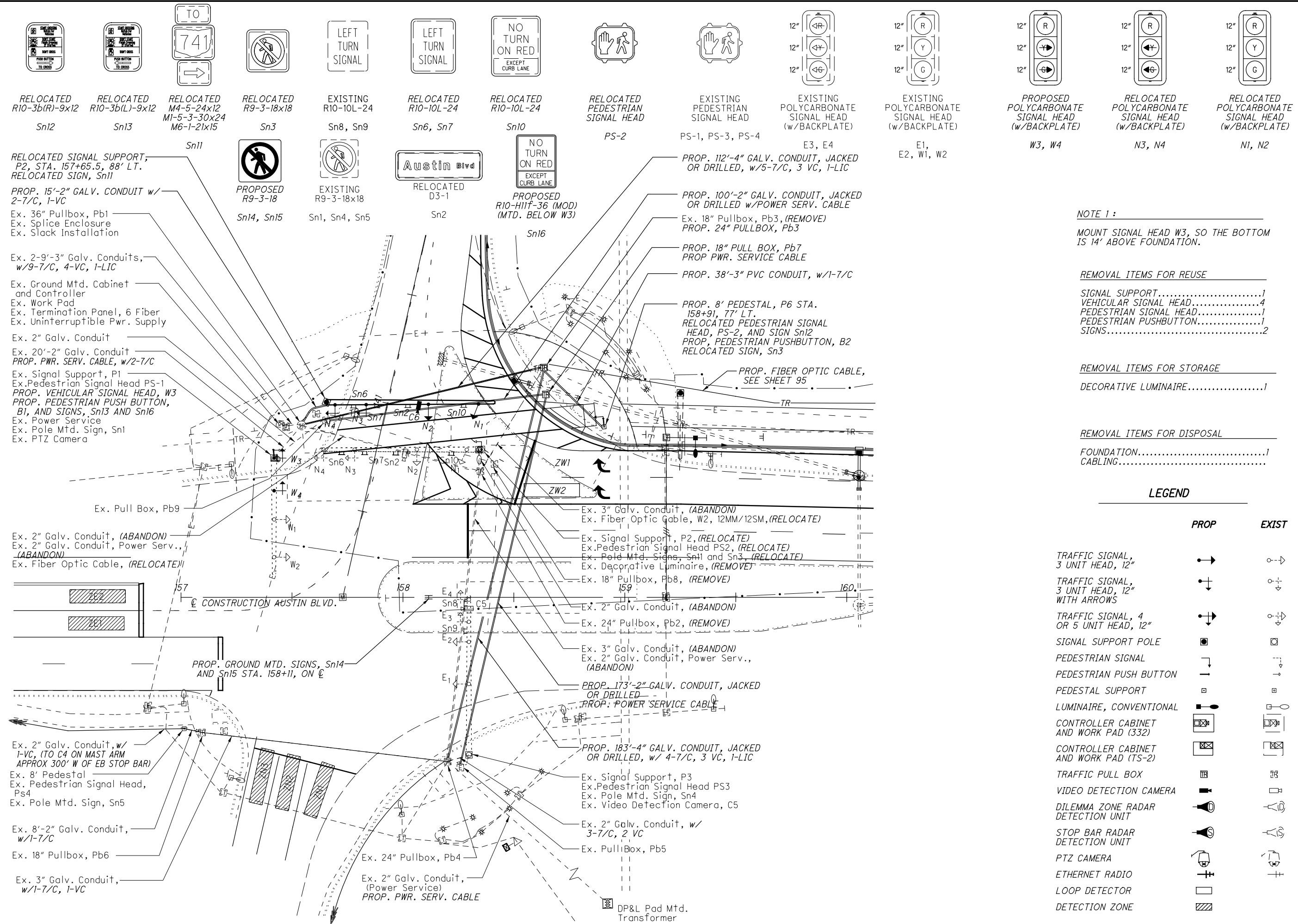
PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH OF "ITEM 816 VIDEO DETECTION SYSTEM, AS PER PLAN".

CALCULATED	LAS	TRAFFIC SIGNAL NOTES	MOT-75-0.76	<div>76106</div>
	CHECKED PCG			

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SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED LAS CHECKED PCG	TRAFFIC SIGNAL GENERAL SUMMARY	MOT-75-0.76
82	83	84	89	90	96A						01/MS/OT											
																	TRAFFIC SIGNALS					
	15				730						745			625	25400	745	FT	CONDUIT, 2", 725.04				
	38			6							44			625	25502	44	FT	CONDUIT, 3", 725.05				
	273				245						518			625	25903	518	FT	CONDUIT, JACKED OR DRILLED, 725.04, AS PER PLAN, 2"	74			
	773			138							911			625	25903	911	FT	CONDUIT, JACKED OR DRILLED, 725.04, AS PER PLAN, 4"	74			
				1							1			625	27520	1	EACH	REMOVAL OF LUMINAIRE AND REERECTION				
	53			6	730						789			625	29000	789	FT	TRENCH				
	1			1							2			625	30700	2	EACH	PULL BOX, 725.08, 18"				
	1										1			625	30706	1	EACH	PULL BOX, 725.08, 24"				
					1						1			625	30711	1	EACH	PULL BOX, 725.08, 32", AS PER PLAN	74			
2	3			1	2						6			625	31510	6	EACH	PULL BOX REMOVED				
			1								3			625	32000	3	EACH	GROUND ROD				
				1							1			625	35520	1	EACH	REMOVE AND REERECT BRACKET ARM				
		14									14			630	03100	14	FT	GROUND MOUNTED SUPPORT, NO. 3 POST				
		5		4	2						11			630	79100	11	EACH	SIGN HANGER ASSEMBLY, MAST ARM				
					2						2			630	79200	2	EACH	SIGN ATTACHMENT ASSEMBLY, MAST ARM				
		4		2							6			630	79500	6	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED				
		17		9	15						41			630	80100	41	SF	SIGN, FLAT SHEET				
				4							6			630	87100	6	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION				
				2							2			630	87400	2	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL				
		6		2							8			630	87520	8	EACH	REMOVAL OF POLE MOUNTED SIGN AND REERECTION				
				1							1			631	97700	1	EACH	SIGN LIGHTING MISC.: REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	74			
4			2								6			632	04000	6	EACH	VEHICULAR SIGNAL HEAD, MISC.: RELOCATION OF EXISTING VEHICULAR SIGNAL HEAD	75			
2			2		1						5			632	05007	5	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	75			
6			5								11			632	25000	11	EACH	COVERING OF VEHICULAR SIGNAL HEAD	75			
2			1								3			632	25010	3	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD				
2											2			632	26000	2	EACH	PEDESTRIAN PUSHBUTTON				
	1										1			632	27200	1	EACH	LOOP DETECTOR TIE IN				
				232							232			632	30980	232	FT	SIGNAL CABLE, 3 CONDUCTOR, NO. 10 AWG				
	48			233							281			632	40300	281	FT	SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG				
	5,579			741	25						6,345			632	40700	6,345	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG				
1			1								2			632	64010	2	EACH	SIGNAL SUPPORT FOUNDATION				
1											1			632	64020	1	EACH	PEDESTAL FOUNDATION				
	529										529			632	65200	529	FT	LOOP DETECTOR LEAD-IN CABLE				
	430										430			632	68300	430	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG				
1			1								2			632	77230	2	EACH	SIGNAL SUPPORT, MECHANICAL DAMPER FOR TC-81.21 MAST ARM (GREATER THAN 59' IN LENGTH)	74			
1											1			632	80700	1	EACH	SIGNAL SUPPORT, MISC.: ANCHOR BOLTS	75			
			1								1			632	81095	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 14, AS PER PLAN	74			
1											1			632	89901	1	EACH	PEDESTAL, 8', TRANSFORMER BASE, AS PER PLAN	74			
1			1								2			632	90100	2	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	74			
					1						1			632	90104	1	EACH	REUSE OF TRAFFIC CONTROL ITEM: VIDEO DETECTION SYSTEM				
					2						2			632	90104	2	EACH	REUSE OF TRAFFIC CONTROL ITEM: SPLICE ENCLOSURE				
					2						2			632	90104	2	EACH	REUSE OF TRAFFIC CONTROL ITEM: DROP CABLE				
					2						2			632	90104	2	EACH	REUSE OF TRAFFIC CONTROL ITEM: TERMINATION PANEL				
1			1								2			632	90202	2	EACH	REUSE OF PEDESTRIAN SIGNAL HEAD				
1											1			632	90207	1	EACH	REUSE OF SIGNAL SUPPORT, AS PER PLAN	75			
			1								1			632	90210	1	EACH	REUSE OF PEDESTRIAN PUSHBUTTON				
1											1			633	99000	1	EACH	CONTROLLER ITEM, MISC.: ADD PHASES	75			
1			1								2			633	99000	2	EACH	CONTROLLER ITEM, MISC.: LOAD SYSTEM TIMINGS	75			
					1,150						1,150			804	15010	1,150	FT	FIBER OPTIC CABLE, 24 FIBER	75			
					LS						LS			804	37701	LS		FIBER OPTIC CABLE TESTING, AS PER PLAN	75			
					1						1			804	98100	1	EACH	FIBER OPTIC CABLE, MISC.: REUSE EXISTING CABLE	75			
	4			1							5			816	30001	5	EACH	VIDEO DETECTION SYSTEM, AS PER PLAN	76			
	</																					

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NOTE 1:
MOUNT SIGNAL HEAD W3, SO THE BOTTOM IS 14' ABOVE FOUNDATION.

REMOVAL ITEMS FOR REUSE
SIGNAL SUPPORT.....1
VEHICULAR SIGNAL HEAD.....4
PEDESTRIAN SIGNAL HEAD.....1
PEDESTRIAN PUSHBUTTON.....1
SIGNS.....2

REMOVAL ITEMS FOR STORAGE
DECORATIVE LUMINAIRE.....1

REMOVAL ITEMS FOR DISPOSAL
FOUNDATION.....1
CABLING.....1

LEGEND		PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"			
TRAFFIC SIGNAL, 3 UNIT HEAD, 12" WITH ARROWS			
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"			
SIGNAL SUPPORT POLE			
PEDESTRIAN SIGNAL			
PEDESTRIAN PUSH BUTTON			
PEDESTAL SUPPORT			
LUMINAIRE, CONVENTIONAL			
CONTROLLER CABINET AND WORK PAD (332)			
CONTROLLER CABINET AND WORK PAD (TS-2)			
TRAFFIC PULL BOX			
VIDEO DETECTION CAMERA			
DILEMMA ZONE RADAR DETECTION UNIT			
STOP BAR RADAR DETECTION UNIT			
PTZ CAMERA			
ETHERNET RADIO			
LOOP DETECTOR			
DETECTION ZONE			

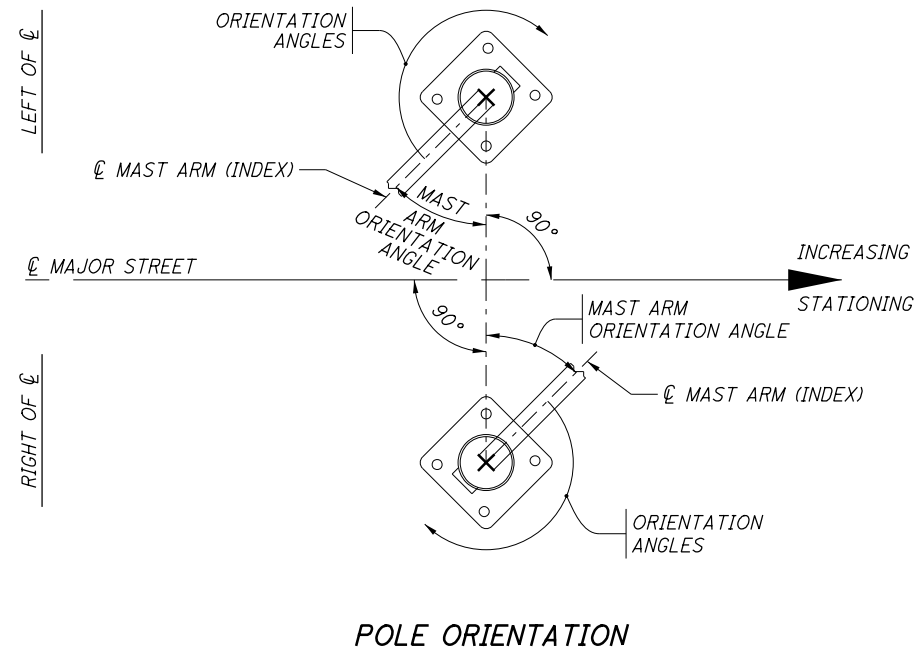
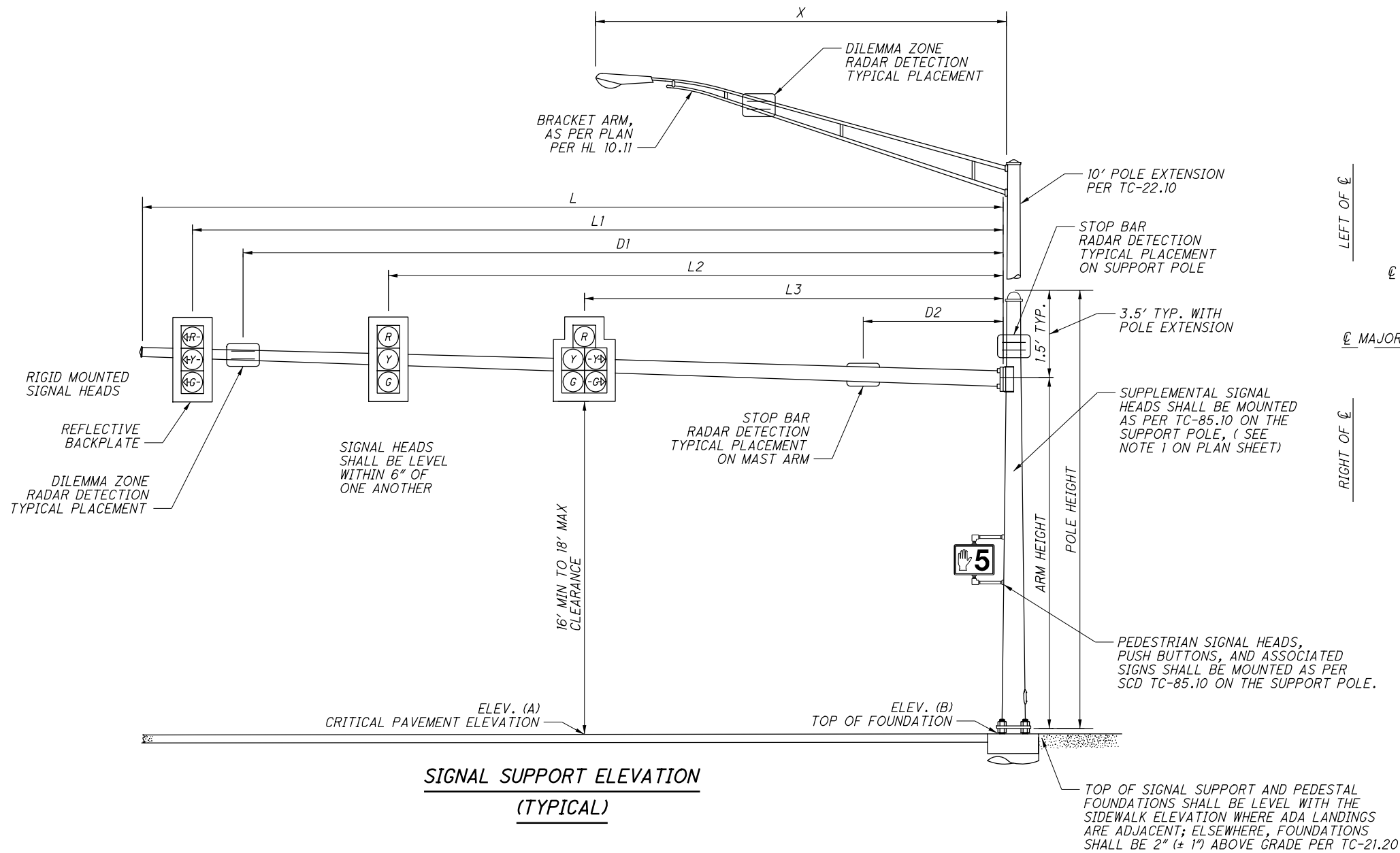
*VOLUME DENSITY CONTROLS

RADAR DETECTION CHART

NOTE: DILEMMA ZONE SPEED THRESHOLD >30 MPH

					BARRIER	BARRIER
RING 1	1	2			4	
RING 2	5	6	7			

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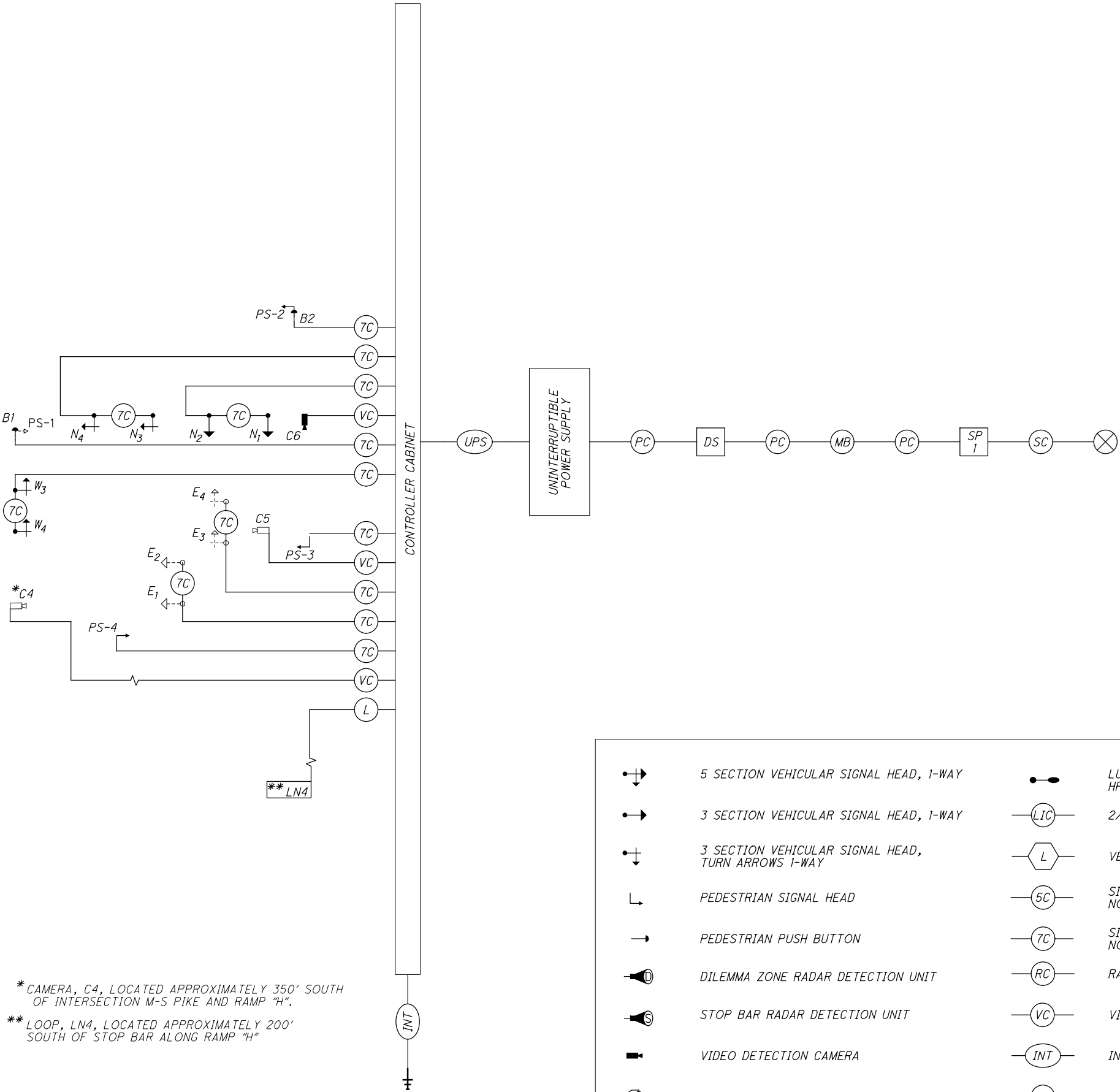


MAST ARM TABLE

SUPPORT NO.	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS														ORIENTATION ANGLES FROM MAST ARM								
			A	B	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	L3	D1	L4	L5	L6	L7	L8	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	POWER SERVICE	PTZ CAMERA	SIGN	HANDHOLE	CABLE ENTRANCE 12" FROM TOP
P1	157+41	63' LT	EX.	EX.	EX. SPEC	EX. SPEC.	42	-	54	51	28	15.5	-	3.5	FT	FT	FT	-	0	-	180	-	-	45	0	180	-
P2	157+65.5	88' LT	938.04	939.01	EX. SPEC	EX. SPEC.	23	19.5	73	68.5	62	46	42	36	21	18	7	4	-	-	-	-	-	-	-	180	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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WIRING DIAGRAM (TYPICAL)



* CAMERA, C4, LOCATED APPROXIMATELY 350' SOUTH OF INTERSECTION M-S PIKE AND RAMP "H".
** LOOP, LN4, LOCATED APPROXIMATELY 200' SOUTH OF STOP BAR ALONG RAMP "H"

FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH	SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH	
W1 W2 (WB)	R	EX P6 R	Y	-	-	-	-	
	Y	EX P6 Y			-	-		
	G	EX P6 G			-	-		
	-	-			-	-		
	-	-			-	-		
E1 E2 (EB)	R	EX P2 R	Y	-	-	-	-	
	Y	EX P2 Y			-	-		
	G	EX P2 G			-	-		
	-	-			-	-		
	-	-			-	-		
W3 W4 (WB RT)	R	P1 R	Y	-	-	-	-	
	---Y-->	P1 Y			-	-		
	---G-->	P1 G			-	-		
	-	-			PEDESTRIAN MOVEMENTS			
	-	-			PS1 2 NORTH	DW		EX P6 DW
E3 E4 (EB LT)	<--R---	EX P5 R	Y	PS3 4 SOUTH	W	EX P6 W		
	<--Y---	EX P5 Y			DW	EX P2 DW	OUT	
	<--G---	EX P5 G			W	EX P2 W		
N1 N2 N3 (NB)	R	EX P4 R	R	-	-	-	-	
	Y	EX P4 Y			-	-		
	G	EX P4 G			-	-	-	-
	-	-			-	-	-	-
	-	-			OVERLAPS			
N4 (NB LT)	<--R---	EX P4 R	R	-	-	-	-	
	<--Y---	EX P4 Y			-	-		
	<--G---	EX P4 G			-	-		
LS = LOAD SWITCH				-	-	-	-	

LEGEND

	5 SECTION VEHICULAR SIGNAL HEAD, 1-WAY		LUMINAIRE, CONVENTIONAL, 150 WATT, HPS, 120 VOLT, AS PER PLAN		SERVICE CABLE, 3 CONDUCTOR, NO. X AWG
	3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY		2/C NO. XX AWG (LEAD-IN CABLE)		POWER CABLE, 2 CONDUCTOR, NO. X AWG
	3 SECTION VEHICULAR SIGNAL HEAD, TURN ARROWS 1-WAY		VEHICLE LOOP DETECTOR		SIGNAL SUPPORT POLE NO. --
	PEDESTRIAN SIGNAL HEAD		SIGNAL CABLE, 5 CONDUCTOR, NO. XX AWG		METER BASE
	PEDESTRIAN PUSH BUTTON		SIGNAL CABLE, 7 CONDUCTOR, NO. XX AWG		NO. X AWG DISTRIBUTION CABLE
	DILEMMA ZONE RADAR DETECTION UNIT		RADAR DETECTION CABLE		NO. XX AWG POLE & BRACKET CABLE
	STOP BAR RADAR DETECTION UNIT		VIDEO CAMERA CABLE		DUAL LIGHTING/SIGNAL DISCONNECT SWITCH
	VIDEO DETECTION CAMERA		INTERCONNECT CABLE		FLASHER CABINET
	PTZ CAMERA		PHOTOELECTRIC CELL		UNINTERRUPTIBLE POWER SUPPLY CABLE
	ETHERNET RADIO		POWER SOURCE		

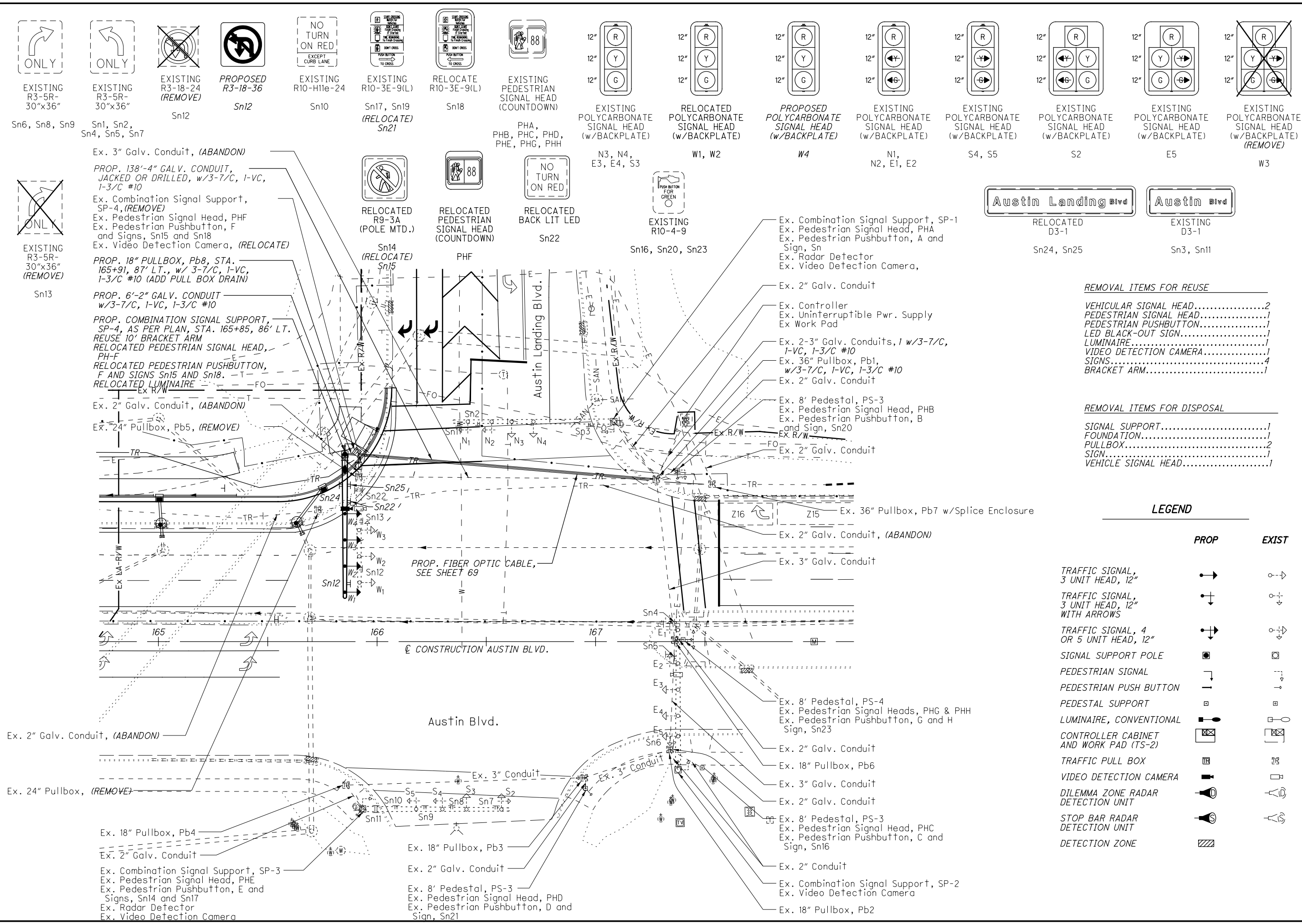
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REF NO.	SHEET NO.	STATION TO STATION			625	625	625	625	625	625	625						632	632	632	632		632	816
					CONDUIT, 2", 725.04	CONDUIT, 3", 725.05	TRENCH	CONDUIT, JACKED OR DRILLED, 725.04, AS PER PLAN, 4"	CONDUIT, JACKED OR DRILLED, 725.04, AS PER PLAN, 2"	PULL BOX, 725.08, 18"	PULL BOX, 725.08, 24"	PULL BOX REMOVED					LOOP DETECTOR LEAD-IN CABLE	LOOP DETECTOR TIE IN	SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG		POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	VIDEO DETECTION SYSTEM, AS PER PLAN
			TO		FT	FT	FT	FT	FT	EACH	EACH	EACH					FT	EACH	FT	FT		FT	EACH
			NB RAMP SIGNAL					478												3500			
PB1	78	157+53,78'LT		NO WORK																			
PB2	78	158+34, 57'LT										1											
PB3	78	158+63, 104'LT								1		1											
PB4	78	158+20, 74'RT		NO WORK																			
PB5	78	156+26,77'RT		NO WORK																			
PB6	78	157+04,60'RT		NO WORK																			
PB7	78	158+64,91'LT							1														
PB8	78	158+41,60'LT										1											
PB9	78	157+65,80'LT		NO WORK																			
	78	157+53, 78'LT	PB1	157+65.5, 88'LT	P2	15		15															
	78	157+53, 78'LT	PB1	158+63, 104'LT	PB3			112															
	78	157+65,80'LT	PB9	158+64,91'LT	PB7				100														
	78	158+63, 104'LT	PB3	158+20, 74'RT	PB4			183															
	78	158+68,91'LT	PB7	156+26,77'RT	PB5				173														
	78	158+63, 104'LT	PB3	158+91, 77'LT	P6			38	38														
	78	157+42, 62'LT	P1	157+42, 62'LT	DPL																	430	
	78	CONT		W3																66			
	78	W3		W4																44			
	78	CONT		B1															48				
	78	CONT		N4																66			
	78	N4		N3																	24		
	78	CONT		N2																	108		
	78	N2		N1																	33		
	78	CONT		PS2																			
	78	CONT		B2																	181		
	78	CONT		E1																	374		
	78	CONT		E3																	401		
	78	CONT		C5																			1
	78	CONT		C6																			1
	78	CONT		C4																			1
	78	CONT		LN4													529	1					
	78	CONT		PS4																	446		
	78	CONT		PS3																	336		
TOTALS CARRIED TO GENERAL SUMMARY					15	38	53	773	273	1	1	3					529	1	48	5579		430	3

TRAFFIC SIGNAL SUBSUMMARY

MOT-75-0.76

CALCULATED
LAS
CHECKED
PCG



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SIGNAL TIMING CHART

INTERSECTION: Austin Blvd & Austin Landing Way									
MAINTAINING AGENCY: Montgomery County Engineer									
START UP START IN: ALL RED TIME FOR FLASH OR ALL RED: 7 FIRST PHASE(S): 2 + 6 COLOR DISPLAYED: GREEN		DUAL ENTRY: YES			PHASES: -				
		REST IN RED:			RING 1 -		RING 2 -		
		OVERLAP				A	B	C	D
		PHASES				-	-	-	-
INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		-	EB	NB LT	SB	EB LT	WB	SB LT	NB
MINIMUM GREEN (INITIAL) (SEC.)		-	15	8	12	8	15	8	12
ADDED INITIAL *(SEC./ACTUATION)		-	-	-	-	-	-	-	-
MAXIMUM INITIAL (SEC.)		-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP) (SEC.)		-	3	3	3	3	3	3	3
TIME BEFORE REDUCTION *(SEC.)		-	-	-	-	-	-	-	-
MINIMUM GAP *(SEC.)		-	-	-	-	-	-	-	-
TIME TO REDUCE *(SEC.)		-	-	-	-	-	-	-	-
MAXIMUM GREEN I (SEC.)		-	40	20	20	20	40	20	20
MAXIMUM GREEN II (SEC.)		-	-	-	-	-	-	-	-
YELLOW CHANGE (SEC.)		-	4.3	3	5.1	4	4.3	3	5.1
ALL RED CLEARANCE (SEC.)		-	2	1	2	2	2	1	2
WALK (SEC.)		-	7	-	-	-	7	-	4
PEDESTRIAN CLEARANCE (SEC.)		-	26	-	-	-	26	-	10
RECALL	MAXIMUM (ON/OFF)	-	ON	OFF	OFF	OFF	ON	OFF	OFF
	MINIMUM (ON/OFF)	-	OFF	OFF	OFF	OFF	OFF	OFF	OFF
	PEDESTRIAN (ON/OFF)	-	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MEMORY (ON/OFF)		-	OFF	OFF	OFF	OFF	OFF	OFF	OFF
*VOLUME DENSITY CONTROLS									
*PHASE 8 PED IS A TWO STAGE CROSSING									

PULL BOX CHART

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB1	167+30	LT	76	EX 24
PB2	167+32	RT	45	EX 18
PB3	166+95	RT	63	EX 18
PB4	165+86	RT	65	EX 18
PB5	165+89	LT	72	EX 24
PB6	167+32	LT	2	EX 18
PB7	167+53	LT	69	EX 36
PB8	165+91	LT	87	18

RADAR DETECTION CHART

LOOP DESIGNATION	LOOP CONFIGURATION**	SIZE (FT.)	PULSE OR PRESENCE	DELAY PROGRAMMED IN CONTROLLER (SEC.)	EXTENSION PROGRAMMED IN CONTROLLER (SEC.)	CONNECT TO DETECTOR UNIT (UNIT-CHANNEL)	ASSOCIATED CONTROLLER PHASE	TERMINAL NO.*
-	-	-	-	-	-	-	-	-
Z16	VIDEO	-	PRESENCE	15	-	-	6	-
Z15	VIDEO	-	PRESENCE	10	-	-	6	-
-	-	-	-	-	-	-	-	-
Z25	RADAR	-	PULSE	-	-	-	6	-
Z26	RADAR	-	PULSE	-	-	-	6	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-

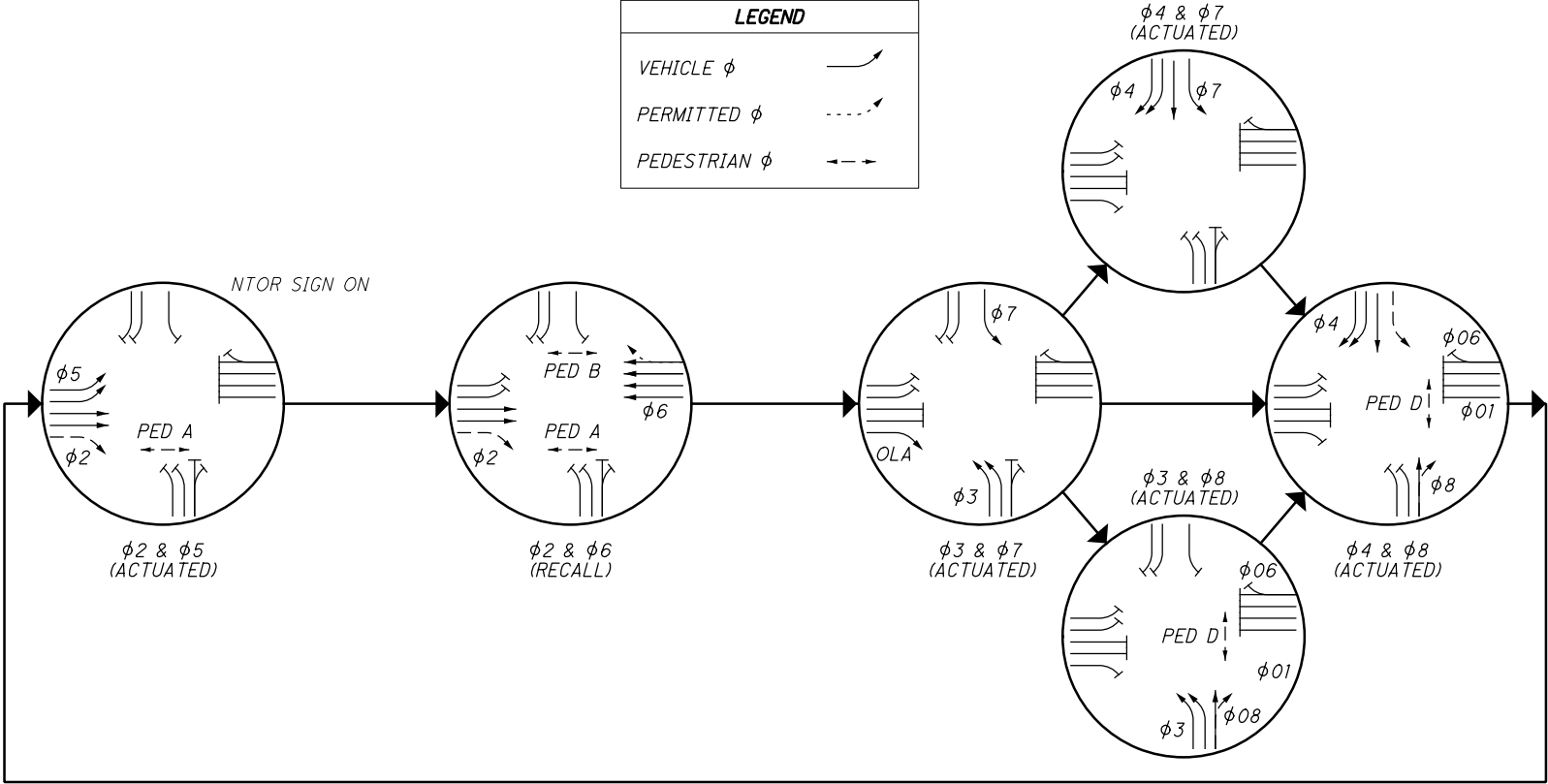
* FOR 332/336 CABINET

** CONFIGURATIONS: POWERHEAD (P), QUADRUPOLE (Q), ANGULAR DESIGN DETECTOR (ADD), OR RECTANGULAR (R); PER TC-82.10

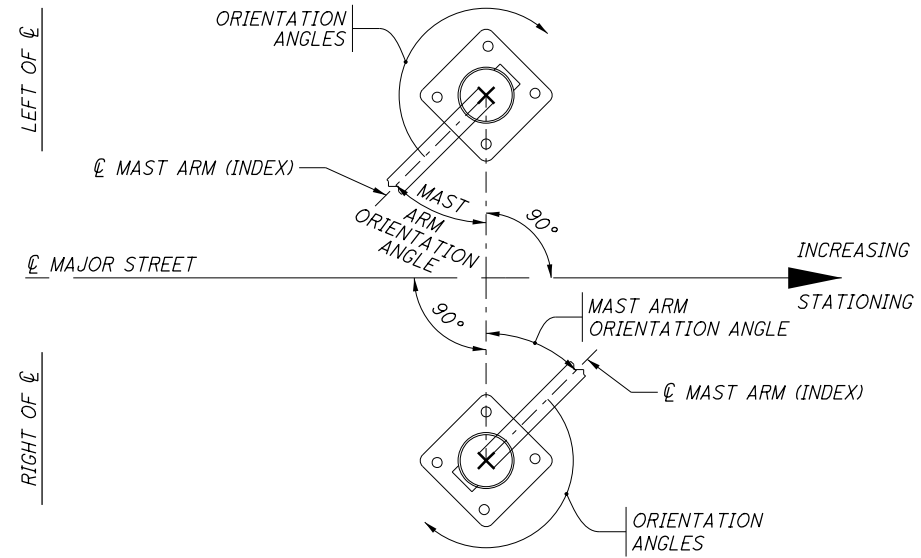
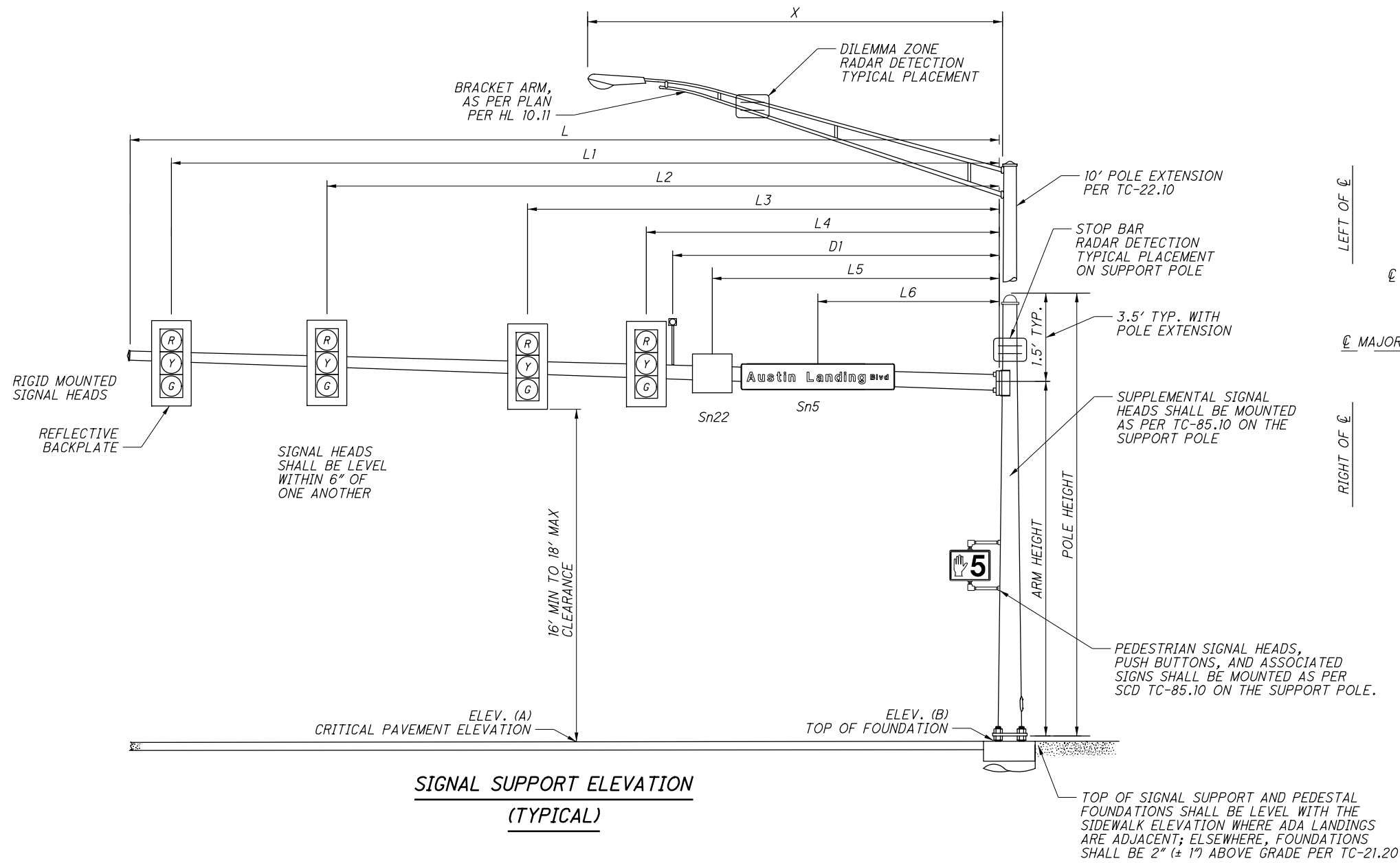
NOTES:

- DETECTORS Z15 AND Z16 TO BE DISABLED, SEE SHEET 61.
- DETECTOR Z25 TO BE EXPANDED TO NORTHERN MOST WESTBOUND LANE, NON-LOCK MODE, SEE SHEET 48.
- DETECTOR Z26 NON LOCK MODE SEE SHEET 48.

PHASING DIAGRAM



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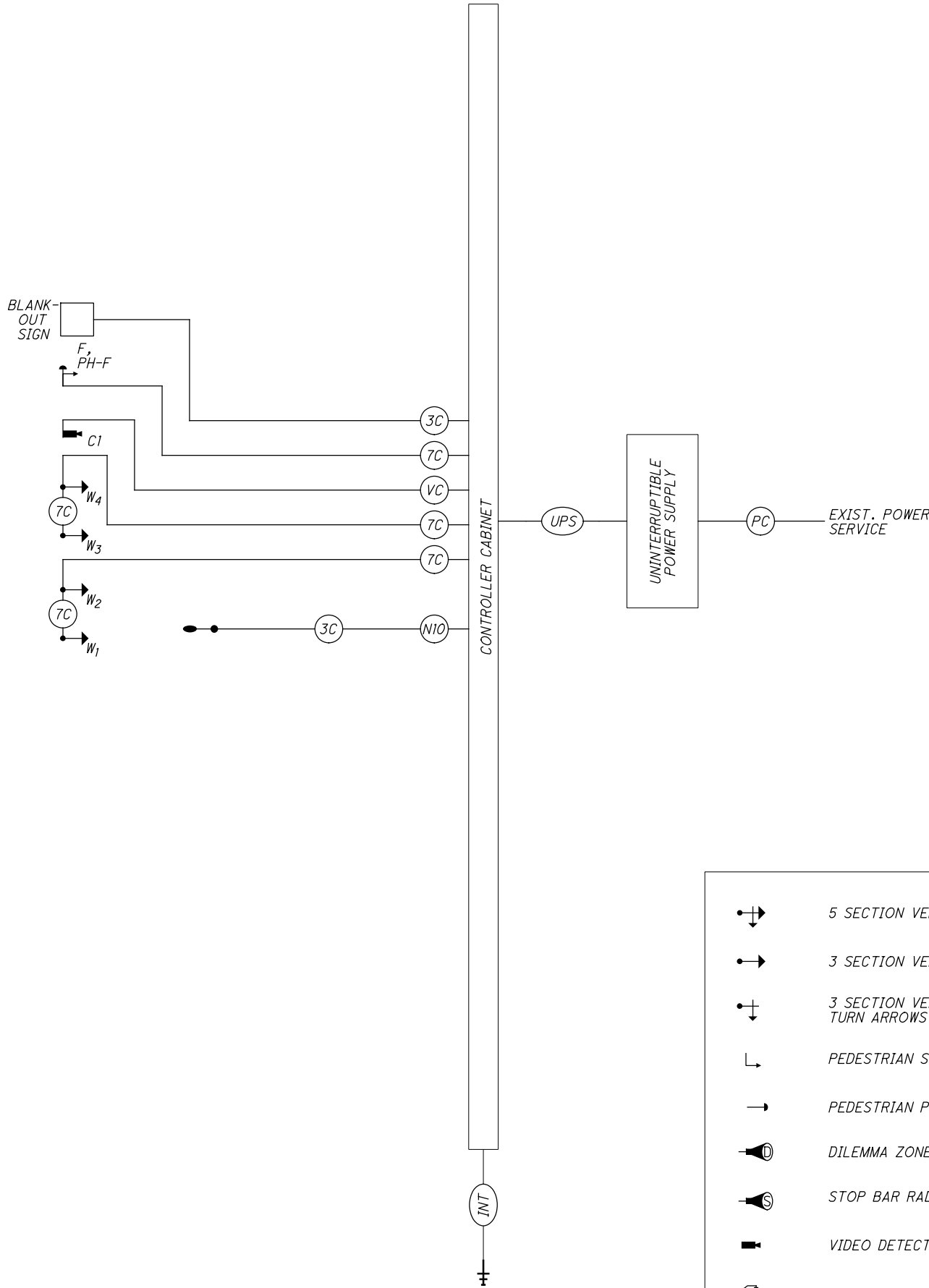
POLE ORIENTATION

MAST ARM TABLE

SUPPORT NO.	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS														ORIENTATION ANGLES FROM MAST ARM								
			A	B	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	L3	L4	L5	L6	D1	D2	X	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	POWER SERVICE	CONTROLLER	BRACKET ARM	HANDHOLE	CABLE ENTRANCE 12" FROM TOP
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP-4	165+85	86' LT	921.63	922.30	TC-81.21	14	34	18.5	66	63	51	36	27	22	14	25	-	10	0	-	0	180	-	-	0	180	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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WIRING DIAGRAM (TYPICAL)



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH	SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH		
N1 N2 (NB LT)	R	EX P3 R	R	S3 (SB)	R	EX P4 R	R		
	<--Y---	EX P3 Y			Y	EX P4 Y			
	<--G---	EX P3 G			G	EX P4 G			
N3 N4 (NB)	R	EX P8 R	R	S4 S5 (SB RT)	R	EX OLA R	R		
	Y	EX P8 Y			<--Y-->	EX OLA Y			
	G	EX P8 G			<--G-->	EX OLA G			
E1 E2 (EB LT)	R	EX P5 R	Y	W1 W2 W3 W4 (WB)	R	EX P6 R	Y		
	<--Y---	EX P5 Y			Y	EX P6 Y			
	<--G---	EX P5 G			G	EX P6 G			
E3 E4 (EB)	R	EX P2 R	Y	NTOR SIGN	-	EX P5 G	-		
	Y	EX P2 Y			-	-			
	G	EX P2 G			-	-			
E5 (EB RT)	R	EX P2 R	Y	-	-	-	-		
	Y	EX P2 Y			-	-			
	G	EX P2 G			PEDESTRIAN MOVEMENTS				
	<--Y-->	EX P3 Y			PHA-F NORTH	DW		EX P6 DW	OUT
	<--G-->	EX P3 G			PHA-F NORTH	W		EX P6 W	OUT
S2 (SB)	R	EX P4 R	R	PHBGHC EAST	DW	EX P8 DW	OUT		
	Y	EX P4 Y			W	EX P8 W			
	G	EX P4 G		PHD-E SOUTH	DW	EX P2 DW	OUT		
	<--Y---	EX P7 Y		W	EX P2 W	OUT			
	<--G---	EX P7 G		-	-	-	-		
LS = LOAD SWITCH				-	-	-	-		

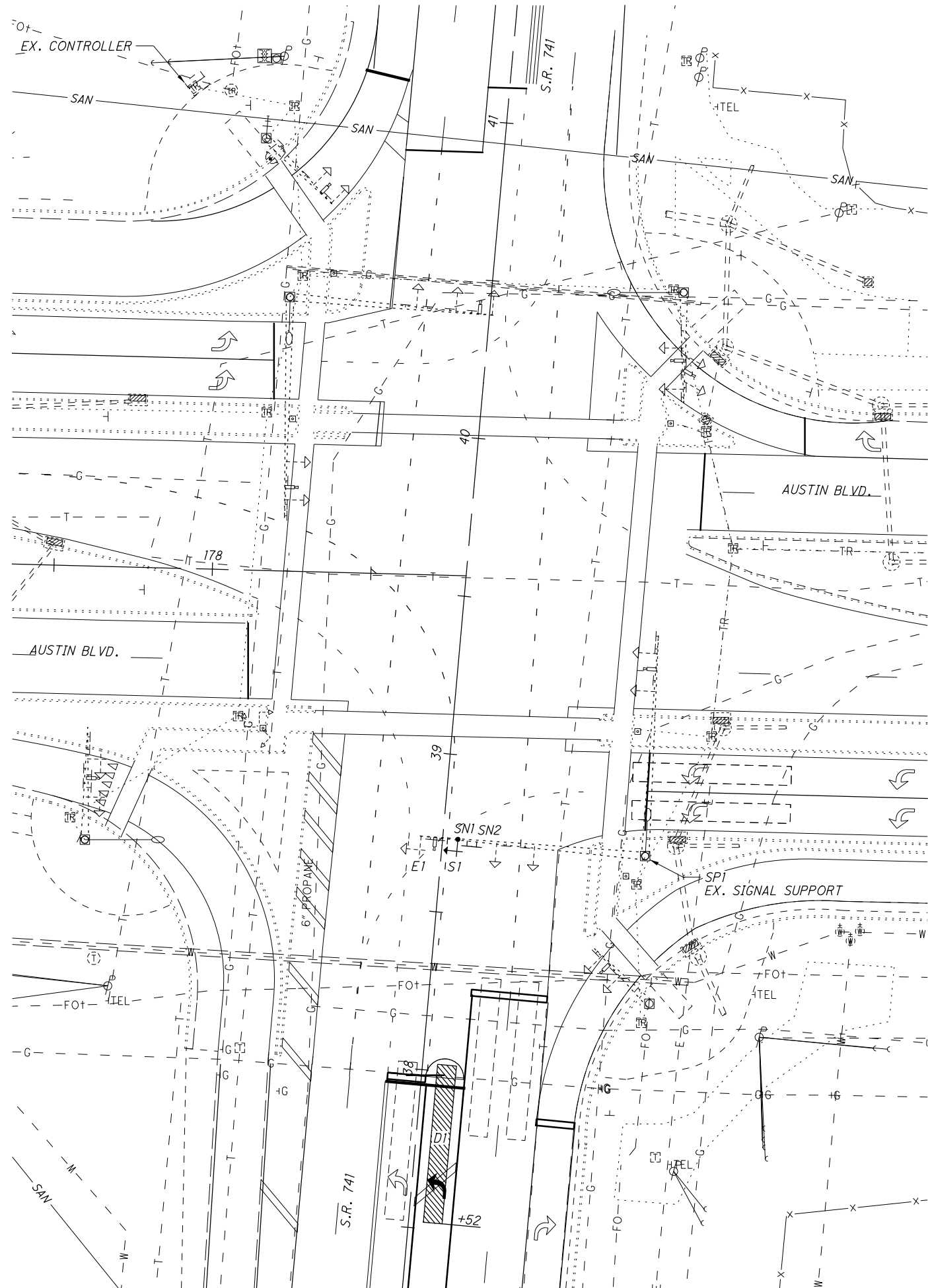
LEGEND

	5 SECTION VEHICULAR SIGNAL HEAD, 1-WAY		LUMINAIRE, CONVENTIONAL, 150 WATT, HPS, 120 VOLT, AS PER PLAN		SERVICE CABLE, 3 CONDUCTOR, NO. X AWG
	3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY		2/C NO. XX AWG (LEAD-IN CABLE)		POWER CABLE, 2 CONDUCTOR, NO. X AWG
	3 SECTION VEHICULAR SIGNAL HEAD, TURN ARROWS 1-WAY		VEHICLE LOOP DETECTOR		SIGNAL SUPPORT POLE NO. --
	PEDESTRIAN SIGNAL HEAD		SIGNAL CABLE, 5 CONDUCTOR, NO. XX AWG		METER BASE
	PEDESTRIAN PUSH BUTTON		SIGNAL CABLE, 7 CONDUCTOR, NO. XX AWG		NO. X AWG DISTRIBUTION CABLE
	DILEMMA ZONE RADAR DETECTION UNIT		RADAR DETECTION CABLE		NO. XX AWG POLE & BRACKET CABLE
	STOP BAR RADAR DETECTION UNIT		VIDEO CAMERA CABLE		DUAL LIGHTING/SIGNAL DISCONNECT SWITCH
	VIDEO DETECTION CAMERA		INTERCONNECT CABLE		LIGHTED BLANKOUT SIGN
	PTZ CAMERA		PHOTOELECTRIC CELL		UNINTERRUPTIBLE POWER SUPPLY CABLE
	ETHERNET RADIO		POWER SOURCE		

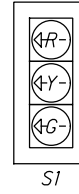
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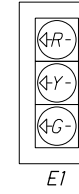
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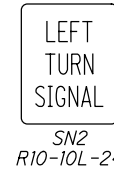
PROPOSED SIGNAL HEADS



EXISTING SIGNAL HEADS



PROPOSED SIGNS



NOTE: UNIMPACTED EXISTING SIGNS AND SIGNALS NOT DETAILED FOR CLARITY

LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12" WITH ARROWS		
SIGNAL SUPPORT POLE		
PEDESTRIAN SIGNAL		
PEDESTRIAN PUSH BUTTON		
PEDESTAL SUPPORT		
LUMINAIRE, CONVENTIONAL		
CONTROLLER CABINET AND WORK PAD		
TRAFFIC PULL BOX		
VIDEO DETECTION CAMERA		
PTZ CAMERA		
ETHERNET RADIO		
DETECTION ZONE		
SIGN		

ENGINEERS SEAL:



SIGNED: *Aaron Littman*
DATE: 10/23/2018

SIGNAL PLAN
S.R. 741 & AUSTIN BLVD.

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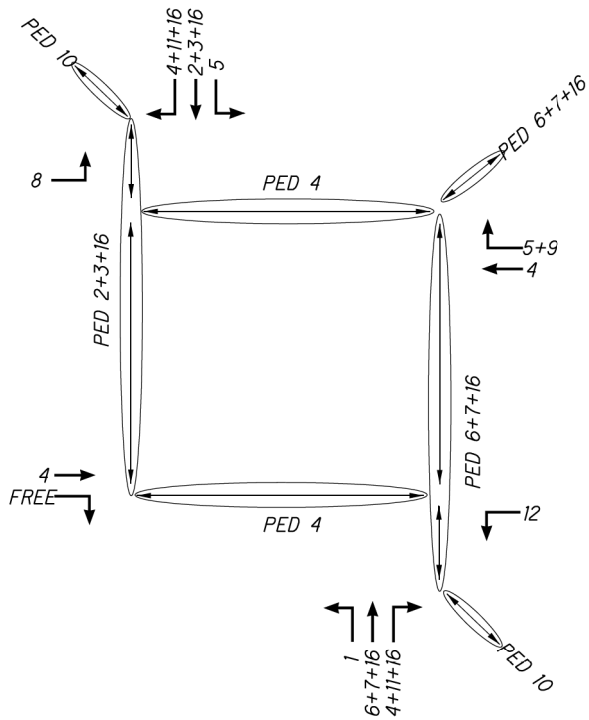
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14+16
FREE

WEST

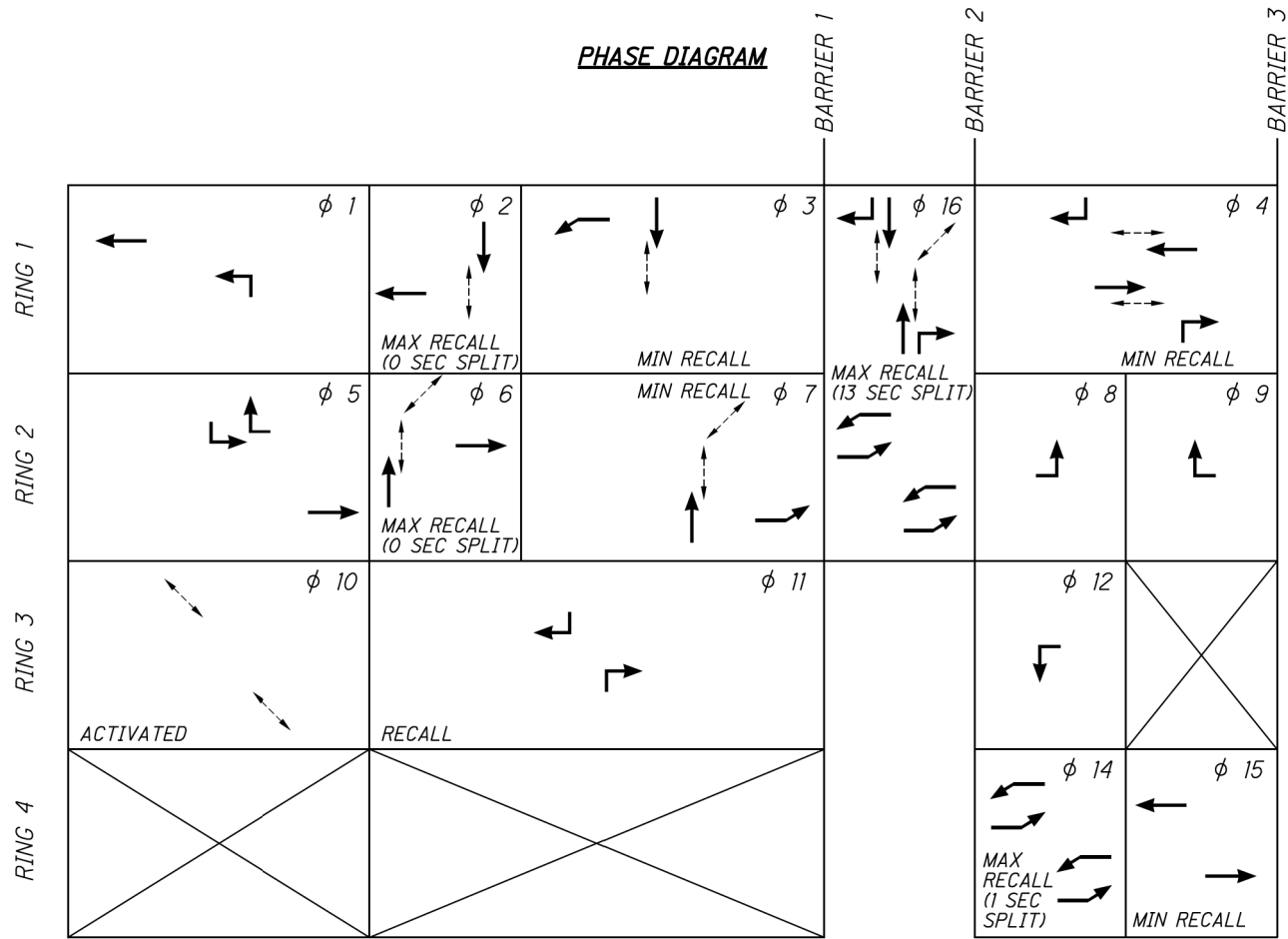
3+14+16
1+2+15



5+6+15
7+14+16

FREE
14+16

EAST



ENGINEERS SEAL:

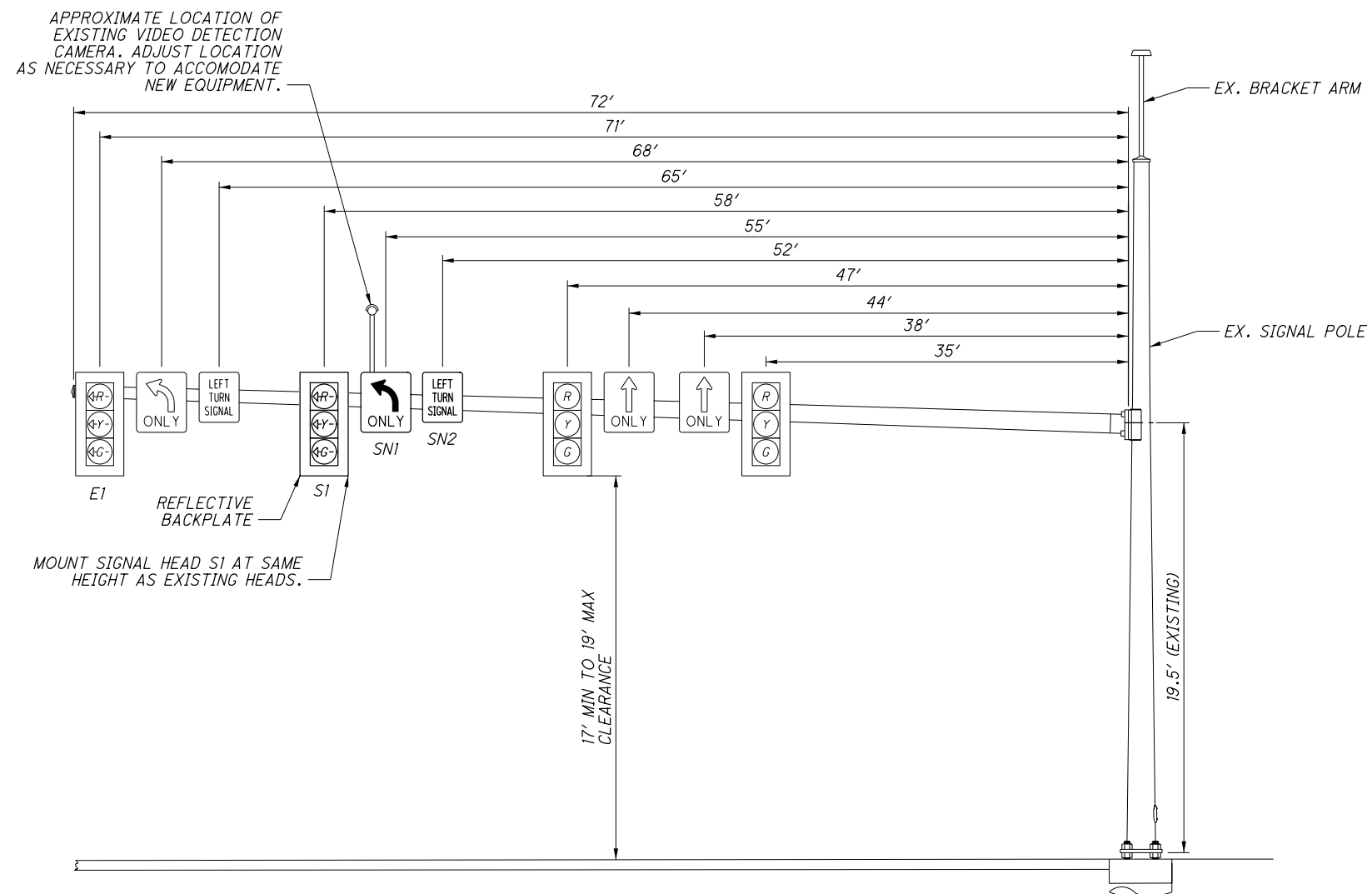
STATE OF OHIO
AARON LITTMAN
68714
REGISTERED PROFESSIONAL ENGINEER

SIGNED: *Aaron Littman*
DATE: 10/23/2018

MOT-75-0.76

SIGNAL DETAILS - S.R. 741 & AUSTIN BLVD.

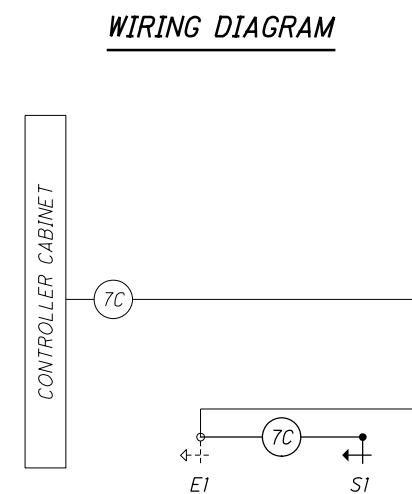
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SIGNAL SUPPORT ELEVATION - SP1

NOT TO SCALE

EXISTING DIMENSIONS ARE APPROXIMATE AND MAY VARY FROM ACTUAL FIELD CONDITIONS



WIRING DIAGRAM

LEGEND

7C

SIGNAL CABLE, 7 CONDUCTOR,
NO. 14 AWG

NOTE: UNIMPACTED WIRING NOT SHOWN FOR CLARITY.

VIDEO DETECTION CHART

DETECTION ZONE	MOVEMENT	PULSE OR PRESENCE	ASSOCIATED PHASE	DELAY IN CONTROLLER (SEC)	DELAY INHIBIT PHASE	PURPOSE	DETECTION ZONE LENGTH (FT)
D1	NB / T	PRESENCE	1	0	-	CALL / EXTEND PHASE 1	50

MAINTAIN ALL OTHER EXISTING DETECTION

ENGINEERS SEAL:



SIGNED: Racon Littman
DATE: 10/23/2018

SIGNAL DETAILS - S.R. 741 & AUSTIN BLVD.

MOT-75-0.76

$$\frac{93}{106}$$

CALCULATED	
NDE	
CHECKED	
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COORDINATION TIMING CHART

PHASE	SPLITS (G+Y+AR) IN SECONDS								SPLITS (G+Y+AR) IN PERCENT								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)	OFFSET 2 (SEC)
	1	2	3	4	5	6	7	8	-	-	-	-	-	-	-	-			
DIRECTION	WB L	EB	-	-	-	WB	-	SB	-	-	-	-	-	-	-	-			
PLAN NO.	AUSTIN & I-75 SB RAMP																		
4/3/1 (AM)	33	48				81		69									150	85	
4/4/1 (PM)	38	40				78		72									150	41	

PHASE	SPLITS (G+Y+AR) IN SECONDS								SPLITS (G+Y+AR) IN SECONDS								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)	OFFSET 2 (SEC)
	1	2	3	4	5	6	7	8	-	-	-	-	-	-	-	-			
DIRECTION	-	EB	-	NB	EB L	WB	WB PED	-	-	-	-	-	-	-	-	-			
PLAN NO.	AUSTIN & I-75 NB RAMP																		
4/3/1 (AM)	-	105	-	45	20	42	43	-	-	-	-	-	-	-	-	-	150	33	-
4/4/1 (PM)	-	104	-	46	15	46	43	-	-	-	-	-	-	-	-	-	150	119	-

PHASE	SPLITS (G+Y+AR) IN SECONDS								SPLITS (G+Y+AR) IN SECONDS								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)	OFFSET 2 (SEC)
	1	2	3	4	5	6	7	8	-	-	-	-	-	-	-	-			
DIRECTION	-	EB	NB L	SB	EB L	WB	SB L	NB	-	-	-	-	-	-	-	-			
PLAN NO.	AUSTIN & AUSTIN LANDING																		
4/3/1 (AM)	-	111	17	22	47	64	14	25	-	-	-	-	-	-	-	-	150	61	-
4/4/1 (PM)	-	103	25	22	41	52	22	25	-	-	-	-	-	-	-	-	150	11	-


PHASE	SPLITS (G+Y+AR) IN SECONDS								SPLITS (G+Y+AR) IN SECONDS								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)	OFFSET 2 (SEC)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
DIRECTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
PLAN NO.	AUSTIN & SR 741																		
4/3/1 (AM)	52	14	11	60	14	51	12	50	10	10	67	60	-	12	48	13	150	0	-
4/4/1 (PM)	47	29	13	48	32	38	19	38	10	10	19	48	-	12	36	13	150	0	-

COORDINATION TIMING PLANS

DAY(S) OF WEEK	PLAN NO.	IMPLEMENTATION TIME	CYCLE LENGTH (SEC)
MON - SUN	2/4/1	0:00	120
MON - SUN	4/3/1 (AM)	6:45	150
MON - SUN	3/1/1	8:00	120
MON - SUN	4/4/1 (PM)	15:00	150
MON - SUN	3/1/1	19:00	120

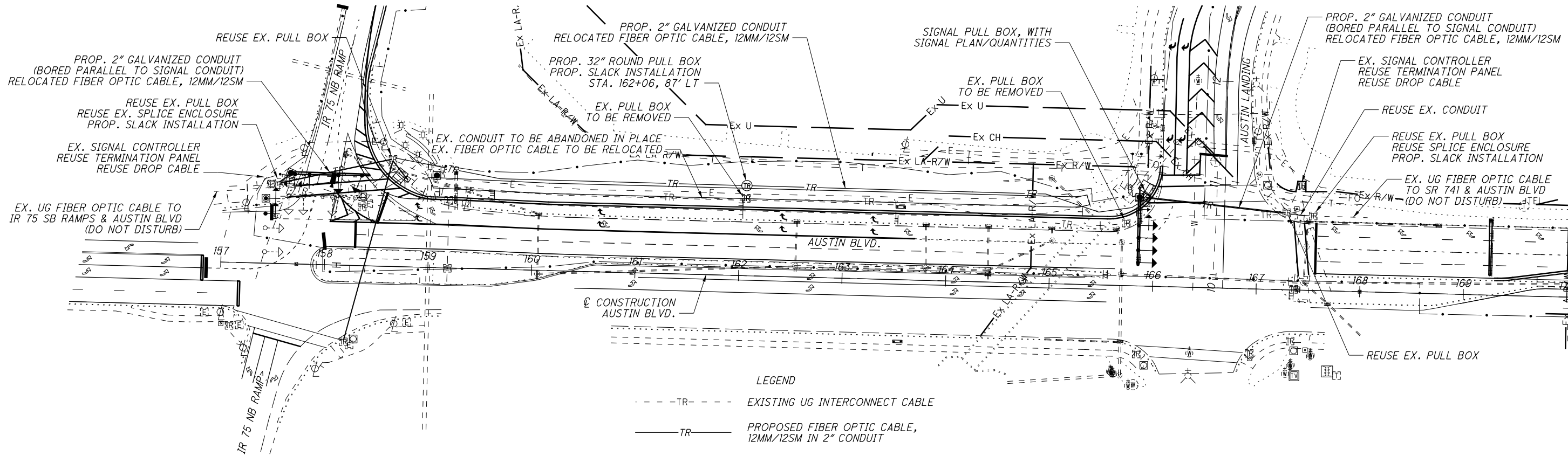
NOTE: ODOT TO PROVIDE OFF-PEAK COORDINATED TIMING PLANS (2/4/1 & 3/1/1)

ENGINEERS SEAL:



SIGNED: *Aaron Littman*
DATE: 10/23/2018

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NOTES:

1. UNLESS OTHERWISE NOTED, EXISTING SPLICE ENCLOSURES, DROP CABLES, AND TERMINATION PANELS SHALL BE REUSED.

ENGINEERS SEAL:



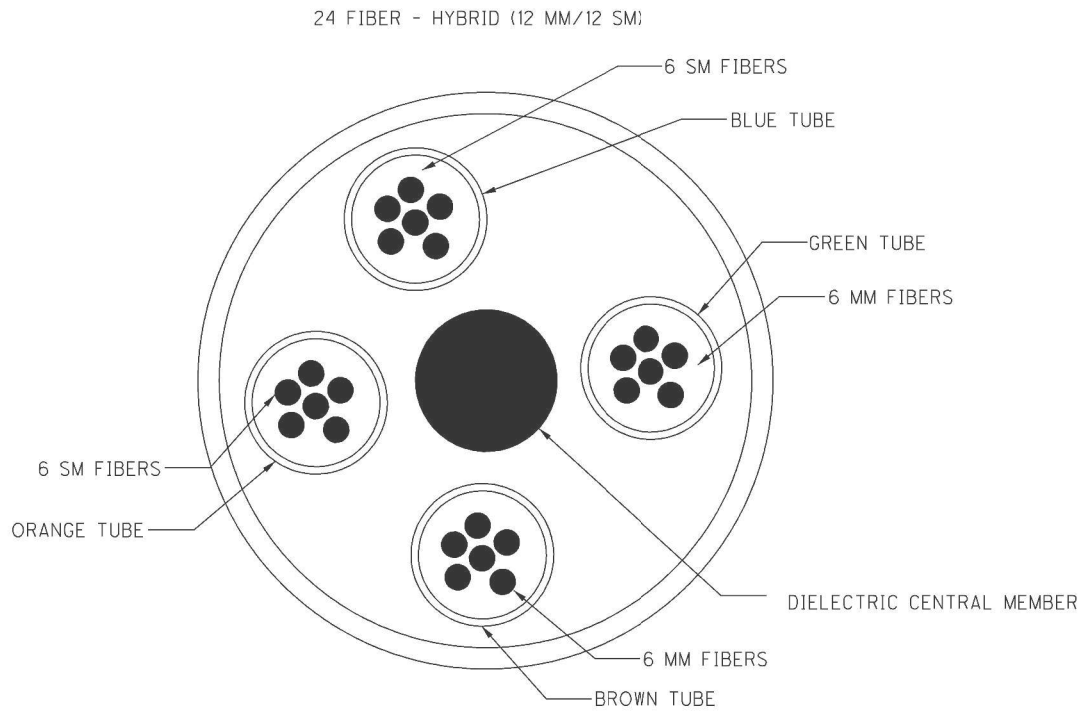
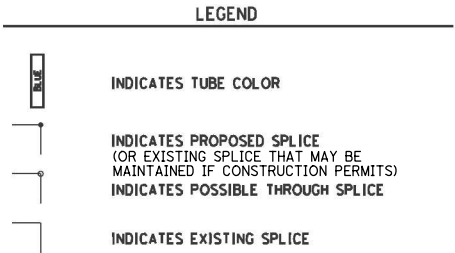
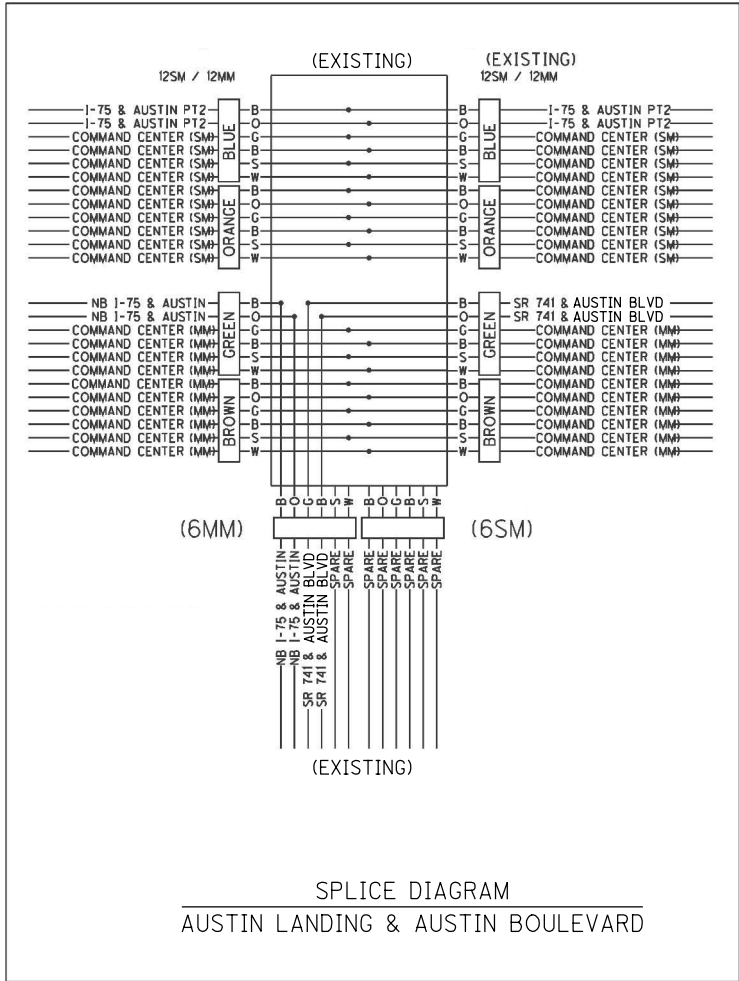
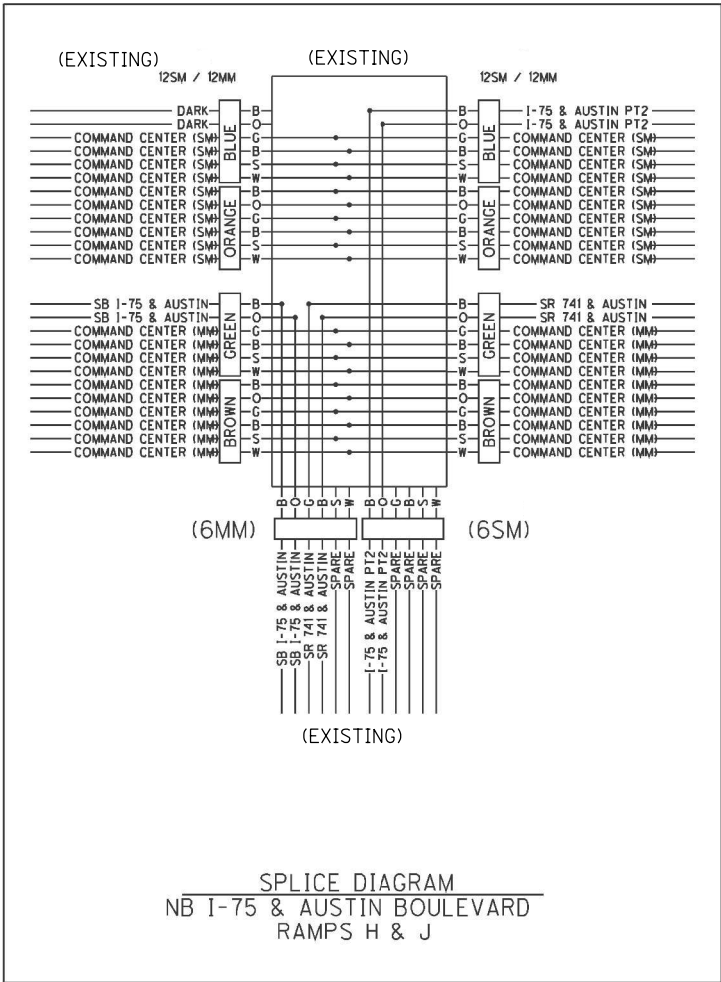
SIGNED: *Aaron Littman*
DATE: 10/23/2018

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SIGNAL INTERCONNECT PLAN
AUSTIN BLVD.



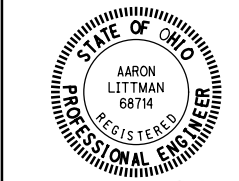
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NOTES:

- 1) Cable construction shall be per and accepted by the rural utility service (RUS).
- 2) Tubes containg fibers shall be distinguished from each other by color coding.
The tubes within each cable shall be colored blue, orange, and green.
- 3) Fibers within each tube shall be dinstinguishable from each other by color coding.
Fibers within each tube shall be colored blue, orange, green, brown, slate, and white.
- 4) Filler tubes may be provided at the option of the cable manufacturer.

ENGINEERS SEAL:



SIGNED: *Aaron Littman*
DATE: 10/23/2018

MOT -75 -0.76

SPLICE DIAGRAMS & CABLE CONSTRUCTION

CALCULATED
NDE
CHECKED
ADL

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106

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GENERAL

THESE NOTES ARE SUPPLEMENTAL TO ITEMS 202, 625 AND 725 OF THE ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS.

625, CONDUIT CLEANED AND CABLES REMOVED

THIS ITEM SHALL CONSIST OF CLEANING AN EXISTING CONDUIT BY REMOVING EXISTING CABLES, MUD AND DEBRIS SO THAT NEW CABLE CAN BE INSTALLED. INCIDENTAL TO THE CLEANING IS THE INSTALLATION OF BUSHINGS AND/OR COUPLINGS ON THE ENDS OF EXISTING CONDUIT AS REQUIRED. MATERIALS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR PROPER DISPOSAL OFF OF THE PROJECT SITE. DISTURBED AREAS SHALL BE PROPERLY RESTORED.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER C&MS ITEM 625, "CONDUIT CLEANED AND CABLES REMOVED" PER FOOT OF CONDUIT CLEANED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

LAMPS

HIGH PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "LUCALOX," OSRAM SYLVANIA "LUMALUX," PHILIPS "CERAMALUX," OR EQUAL APPROVED BY THE ENGINEER.

SPECIAL, MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF THE EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF EXISTING LIGHTING SHALL BE MADE BY ODOT'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR.

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE THE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT SHALL BE MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED DOWNED UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENT.

WHEN THE SEQUENCE OF CONSTRUCTION ACTIVITIES REQUIRES, OR SHOULD THE CONTRACTOR DESIRE, THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING OF THIS PORTION OF THE ROADWAY.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR SETS OF THE TEMPORARY LIGHTING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATIONS OF POLES, LENGTHS OF BRACKET ARMS, STYLES OF LUMINAIRES, MOUNTING HEIGHTS, WIRING METHODS AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 3:1. MOUNTING HEIGHT OF TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 30 FEET, AND THE MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "B" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN

UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE OF THE LIGHTING WORK. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

THE LUMP SUM PRICE BID FOR ITEM SPECIAL "MAINTAIN EXISTING LIGHTING" SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

THE UNIT PRICE BID FOR ITEM SPECIAL "REPLACEMENT OF EXISTING LIGHTING UNIT" SHALL BE FULL PAYMENT FOR THE REPLACEMENT OF AN EXISTING LIGHTING UNIT WHICH HAS BEEN KNOCKED DOWN AFTER THE AFOREMENTIONED INSPECTION AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE A REPLACEMENT FOR SUCH UNIT.

RECONNECTION OF EXISTING LIGHTING
625, PULL BOX, 725.08, 18", AS PER PLAN

THE PROPOSED PULL BOX LOCATED AT STA. 159+19, 72' LT IS INTENDED FOR THE RECONNECTION OF THE EXISTING LIGHTING. THE CONTRACTOR SHALL MAKE CONNECTION TO THE EXISTING WIRING USING ITEM 625 CONNECTION, UNFUSED PERMANENT. THE EXISTING WIRING IS NO. 8 AND NO. 10 AWG COPPER WIRE. THE EXISTING CIRCUITS ARE 120 / 240 VOLTS.

RECONNECTION OF EXISTING DECORATIVE LIGHTING

THE EXISTING DECORATIVE LIGHT POLE AT STA. 159+32, 72' LT. WILL BE REMOVED FROM THE EXISTING LIGHTING CIRCUIT AND REINSTALLED AS PART OF THE PROPOSED DECORATIVE LIGHTING CIRCUIT.

REMOVAL OF EXISTING LIGHTING

REMOVE EXISTING THE DECORATIVE LUMINAIRE AND BRACKET ARM ON THE SIGNAL SUPPORT AT STA. 158+34, 66.5' LT. THE LUMINAIRE IS OWNED BY MIAMI TOWNSHIP AND IS THE RESPONSIBILITY OF THE CONTRACTOR TO DELIVER THE LUMINAIRE AND BRACKET ARM TO THE MIAMI TOWNSHIP PUBLIC WORKS DEPARTMENT:

10891 WOOD ROAD
MIAMISBURG, OHIO 45342
937-866-4661
7 AM - 3:30 PM

PAYMENT IS VIA THE SIGNAL PLANS.

625, LIGHT POLE FOUNDATION, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 625.10, LIGHT POLE FOUNDATIONS SHALL BE AS FOLLOWS:

-10" BOLT CIRCLE, 3.2" ANCHOR BOLT PROJECTION AND 3/4" X 30" +4" ANCHOR BOLTS.

-FOUNDATIONS ARE TO BE 6' IN DEPTH AND 18" IN DIAMETER.

-FORM THE TOP OF THE FOUNDATION AS A CIRCLE.

-PROVIDE AT LEAST TWO CONDUIT ELLS (CAP UNUSED ELLS), SIZE ELLS AS PER THE PLANS.

-PROVIDE ONE ADDITIONAL 1" PVC CONDUIT ELL FOR IRRIGATION OF POLES.

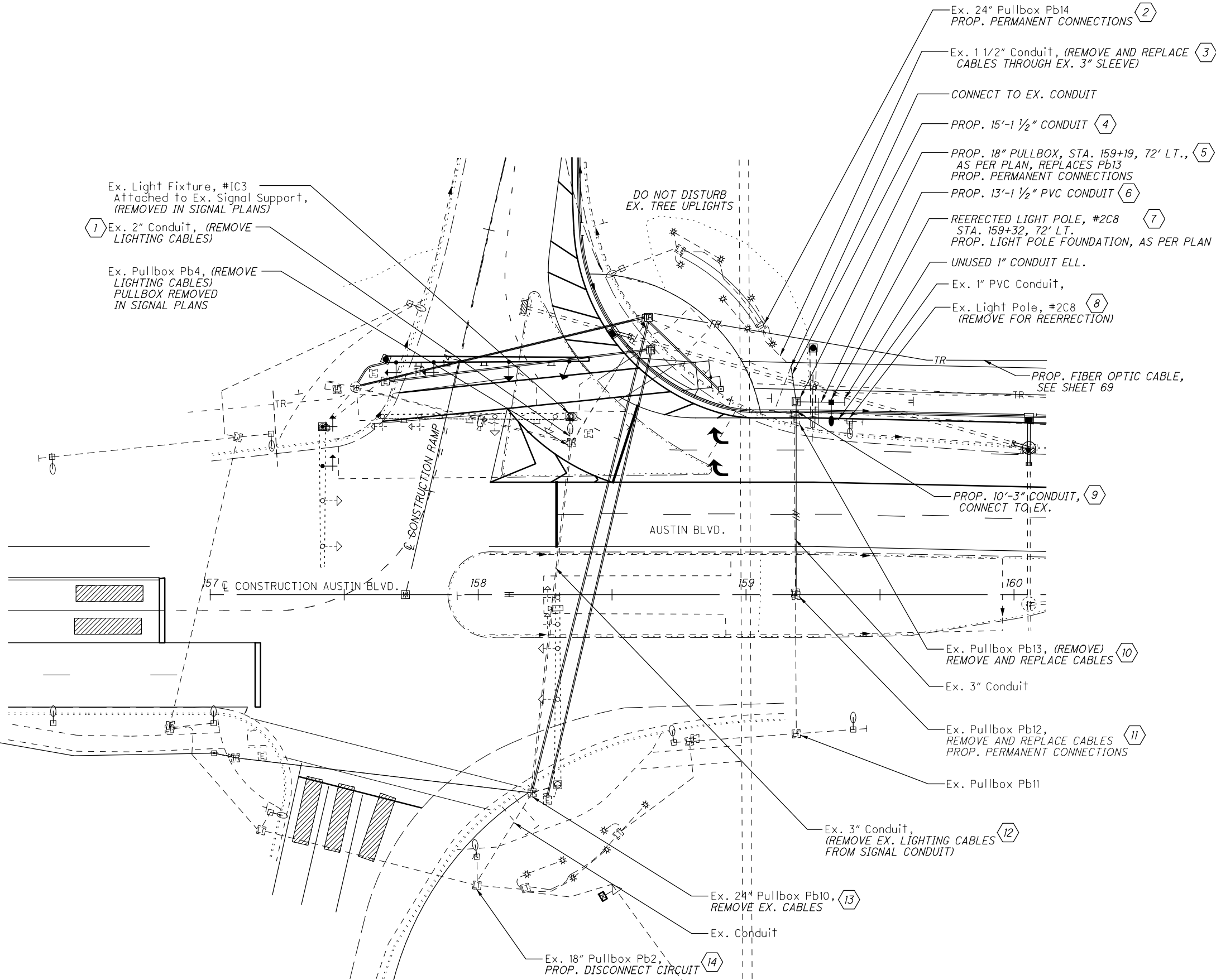
-INCORPORATE EXISTING BREAKAWAY FITTINGS ON EXISTING POLE.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM "625, LIGHT POLE FOUNDATION, AS PER PLAN" FOR EACH LIGHT POLE FOUNDATION WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED.

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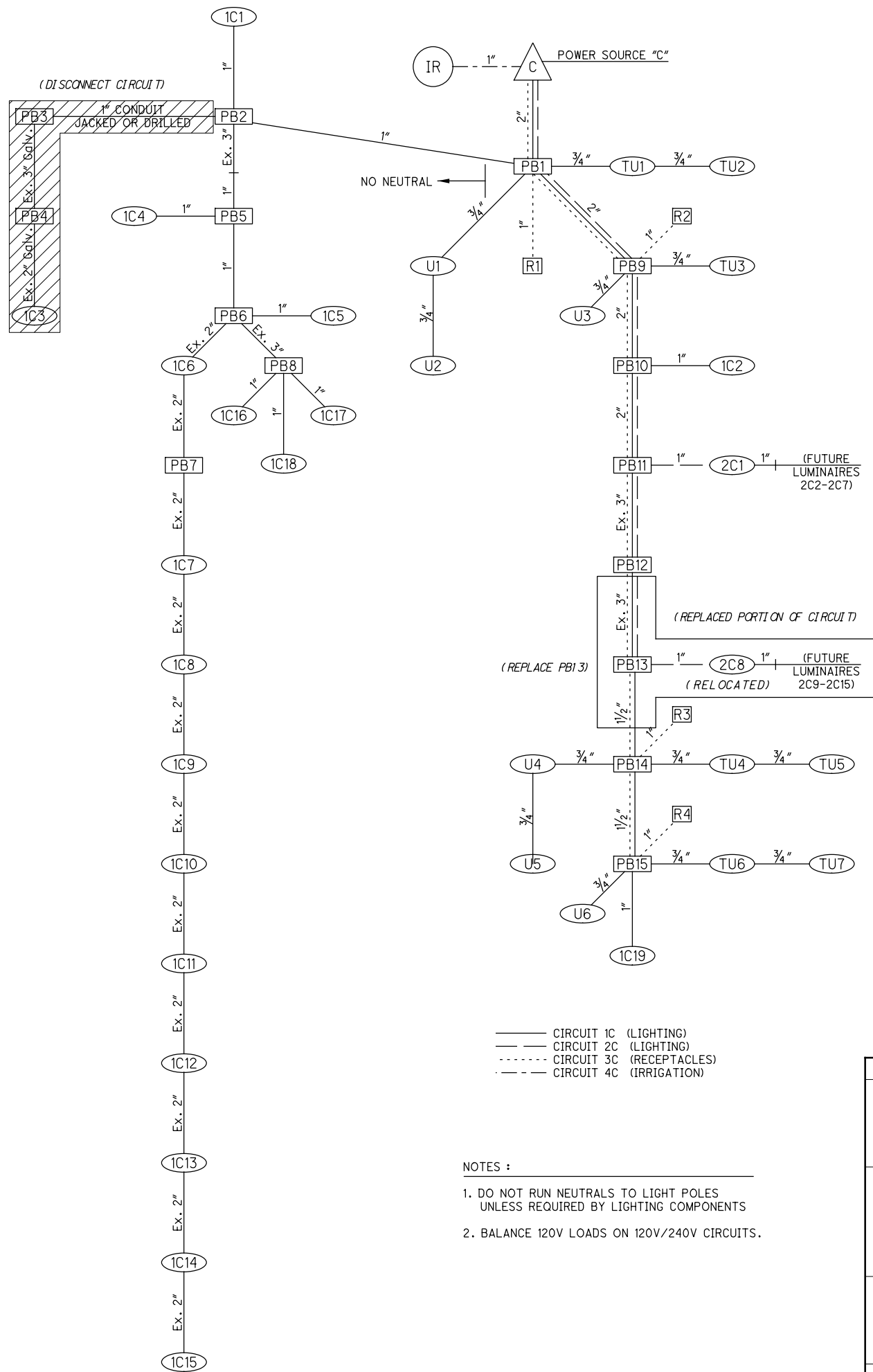
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LIGHTING PLAN
RAMP J AND AUSTIN BLVD.

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CONTROL CENTER DATA											
CONTROL CENTER	LINE VOLTS	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CONDUCTOR SIZE-AWG	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT VOLTS	CIRCUIT LOAD AMPS	CIRCUIT FUSE SIZE AMPS	CIRCUIT CABLE SIZE AWG	CONTROL	MAINTAINING AGENCY
CCC STA. 158+51	120/240	16	3/0	150	1C (LTG)	240	32	40	4 #10	PHOTOCELL	MCTID
					2C (LTG)	240	14	20	3 #10	PHOTOCELL	
					3C (REC)	120	20	30	3 #8	ALWAYS ON	
					4C (IRR)	120	15	20	3 #12	ALWAYS ON	
											MCTID
NOTE: FOR ADDITIONAL CONTROL CENTER DETAILS, SEE STANDARD DRAWINGS.											

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GENERAL REQUIREMENTS

ALL PROPER PRECAUTIONS SO AS NOT TO DISTURB OR DAMAGE SUBSURFACE IMPROVEMENTS SHALL BE OBSERVED. THE CONTRACTOR SHALL CONTACT THE OHIO UTILITIES PROTECTIONS SERVICE (OUPS) 48 HOURS PRIOR TO ANY EXCAVATION OR DIGGING TO ASSURE UNDERGROUND UTILITY LOCATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT SUCH UNDERGROUND UTILITIES. CONTRACTOR TO PROTECT RECENTLY POURED CONCRETE ON THIS PROJECT FROM MARKING PAINT.

SUBMITTALS:

CONTRACTOR TO PROVIDE DATA AND SAMPLES FOR VERIFICATION INCLUDING: PLANT MATERIAL SIZES, QUANTITIES AND SOURCE FOR PLANT MATERIAL, SEED MIX, FERTILIZERS, MULCH, HERBICIDES, AND PRE-EMERGENT INCLUDING PRODUCT LABEL AND MANUFACTURERS APPLICATION INSTRUCTIONS, MATERIAL TEST REPORTS FOR IMPORTED TOPSOIL AND PLANT WARRANTY. THE PLANTING CONTRACTOR SHALL PROTECT ALL IRRIGATION FACILITIES THROUGHOUT THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL CONDUCT WATERING OPERATIONS IN COMPLIANCE WITH ALL PROJECT SPECIFICATIONS AND SHALL PROTECT AGAINST WETTING OF THE PAVEMENT SURFACE.

IN THE EVENT THAT DISCREPANCIES ARISE BETWEEN WHAT IS SHOWN ON THE DRAWING AND ACTUAL FIELD CONDITIONS, MIAMI TOWNSHIP SHALL BE NOTIFIED IMMEDIATELY FOR RESOLUTION.

CMS ITEM 653: TOPSOIL FURNISHED AND PLACED

TOPSOIL PLACEMENT: THE CONTRACTOR SHALL PROVIDE AND PLACE ALL APPROVED AND IMPORTED TOPSOIL FOR ALL LANDSCAPED AREAS TO REQUIRED GRADES. CONTRACTOR TO SUBMIT DOCUMENTATION. TOPSOIL SHALL BE FREE OF JOHNSON GRASS. IT SHALL BE TAKEN FROM A WELL- DRAINED ARABLE SITE. IT SHALL BE REASONABLY FREE OF SUBSOIL, STONES, EARTH, CLODS, STICKS, ROOTS, OR OTHER OBJECTIONABLE EXTRANEIOUS MATTER OR DEBRIS. IT SHALL CONTAIN NO TOXIC MATERIALS.

BEFORE PLACING TOPSOIL, REMOVED ROCK OR OTHER FOREIGN MATERIAL OF 3" OR GREATER IN ANY DIMENSION. APPROVED TOPSOIL SHALL BE PLACED ACCORDING TO THE DEPTH OF THE GIVEN PLANT'S ROOTBALL STRUCTURE. THE PREPARATION OF PLANTING AREAS MAY BEGIN PRIOR TO THE SPECIFIED PLANTING SEASON PROVIDED THE FINISHED GRADE HAS BEEN ESTABLISHED AND APPROVED BY THE ENGINEER, AND PROVIDED THAT IN THE JUDGEMENT OF THE OWNER, THE GENERAL CONSTRUCTION WORK IS SUFFICIENTLY ADVANCED. PLACING TOPSOIL ON ANY SLOPE TO BE PER ODOT ITEM 653 AND 659.05.

CMS ITEM 661.02: PLANT MATERIALS

ALL PLANT MATERIALS SHALL BE IN ACCORDANCE WITH ODOT ITEM 661 AND THE FOLLOWING SPECIFICATIONS. ALL PLANT MATERIAL FURNISHED SHALL BE FULL, WELL BRANCHED, WELL PROPORTIONED, AND HAVE VIGOROUS, WELL DEVELOPED ROOT SYSTEM CAPABLE OF SUSTAINING VIGOROUS GROWTH. ALL TREES AND SHRUBS SHALL BE NO. 1 GRADE PLANTS WITH GROWTH AND BRANCHING HABIT TYPICAL OF THE SPECIES. NO PARK GRADE (NO. 2 OR 3 GRADE) PLANTS WILL BE ACCEPTED. ALL TREES WITHIN A SPECIES SHALL HAVE MATCHING FORM. ALL PLANT MATERIAL SHALL BE OF THE SIZE AND TYPE SPECIFIED. IF SUBSTITUTIONS ARE REQUIRED, ALL SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER.

CMS ITEM 661.04: TRANSPORTATION, STORAGE, AND HANDLING

ALL TRANSPORTATION, STORAGE, AND HANDLING TO BE PER ODOT ITEM 661 AND THE FOLLOWING SPECS. THE CONTRACTOR MAY STORE PLANT MATERIALS AND EQUIPMENT WITHIN THE PROJECT LIMITS AT AN APPROVED LOCATION BY OBTAINING OFFICIAL PERMISSION OF THE ENGINEER. NO PEDESTRIAN OR VEHICULAR TRAFFIC MAY BE IMPEDED, NOR HAZARDOUS CONDITION CREATED AS A RESULT OF SUCH STORAGE. THE STORAGE OF ALL DUG PLANTS SHALL CONFORM TO ITEM 661 WHETHER WITHIN THE PROJECT LIMITS, ADJACENT THERETO, OR AT SOME OTHER LOCATIONS. THESE AREAS SHALL BE DESIGNATED PRIOR TO ACTUAL PLANT STORAGE AND SHALL BE OPEN TO INSPECTION UPON THE REQUEST OF THE ENGINEER.

CMS ITEM 661.06: ACCEPTANCE

ALL PLANTS SHALL BE IN ACCORDANCE WITH ODOT ITEM 661.06 AND THE FOLLOWING. ALL PLANTS SHALL BE INSPECTED AND CERTIFIED IN COMPLIANCE WITH STATE AND FEDERAL LAW BY STATE NURSERY INSPECTOR.

CMS ITEM 661.07: SCHEDULING

DECIDUOUS PLANTS SHALL BE DUG AND PLANTED BETWEEN SEPT. 15 AND NOVEMBER 30 AND/OR BETWEEN MARCH 15 AND JUNE 1. EVERGREENS SHALL BE DUG AND PLANTED AFTER MARCH 15 AND BEFORE JUNE 1.

CMS ITEM 661.08: LAYOUT OF PLANT MATERIAL

ALL LAYOUT OF PLANT MATERIAL TO BE IN ACCORDANCE WITH ODOT ITEM 661.08 UNLESS OTHERWISE NOTED. LOCATIONS FOR PLANTS AND OUTLINES OF BED AREAS SHALL BE CLEARLY MARKED ON THE GROUND IN CONFORMATION WITH THE LANDSCAPE PLANS. MAJOR PLANT MATERIALS SHALL HAVE THEIR LOCATIONS STAKED PRIOR TO ANY EXCAVATION FOR APPROVAL BY MIAMI TOWNSHIP. LOCATIONS MAY BE REVISED BY RE-STAKING PRIOR TO ANY EXCAVATION. THE LOCATIONS OF THE PROPOSED TREES AND SHRUBS ARE APPROXIMATE AND MAY BE RE-ARRANGED AT THE DIRECTION OF THE ENGINEER WHEN OBSTRUCTIONS ARE ENCOUNTERED.

CMS ITEM 661.09: BACKFILL MIX

ALL PLANTS SHALL BE IN ACCORDANCE WITH ODOT ITEM 661.09 UNLESS OTHERWISE NOTED. WHEN THE PLANT HAS BEEN PROPERLY SET, THE PIT SHALL BE BACKFILLED APPROVED IMPORTED TOPSOIL. DO NOT USE ANY REMAINED EXCAVATED MATERIAL. PLANTING SOIL MIX: ASTM D 5268 TOPSOIL WITH PH RANGE OF 5.5 TO 7.5, A MINIMUM OF 4% ORGANIC MATERIAL CONTENT; FREE OF STONES 1" OR LARGER AND OTHER EXTRANEIOUS MATERIALS HARMFUL TO PLANT GROWTH. OBTAIN IMPORTED SOIL OR MANUFACTURED TOPSOIL FROM OFFSITE SOURCES. TOPSOIL TO BE FRIABLE AND HAVE SUFFICIENT STRUCTURE TO GIVE GOOD TILTH AND AERATION TO SUPPORT PLANT GROWTH. AFTER BACKFILLING, TREES WILL BE WATERED THOROUGHLY TO SETTLE THE SOIL AROUND THE ROOT BALL AND ELIMINATE ANY AIR POCKETS.

CMS ITEM 661.10: PLANTING

PLANT MATERIALS SHALL BE INSTALLED ACCORDING TO THE ACCOMPANYING DETAILS IN THE SET. AFTER BACKFILLING, TREES WILL BE WATERED THOROUGHLY TO SETTLE THE SOIL AROUND THE ROOT BALL AND ELIMINATE AIR POCKETS. REMOVED ALL TWINE, BAGS, AND ROPING BEFORE BACKFILLING THE PLANT HOLE. REMOVED THE TOP ONE THIRD OF THE WIRE FROM ROOT BALLS HAVING A WIRE BASKET. REMOVE ALL ROT-PROOF BURLAP.

CMS ITEM 661.10A: PLANTING HOLES

WHERE TREES AND SHRUBS AND SHOWN ON THE PLANS, THE INDIVIDUAL HOLES SHALL BE DUG ON CENTERS PER THE SPACINGS NOTED ON THE LANDSCAPE PLANS. THESE HOLES SHALL ALLOW FOR A MINIMUM OF 12" (INCHES) OF BACKFILL MATERIAL AROUND THE SIDES OF THE BALLS AS ILLUSTRATED ON THE DETAILS. THE BOTTOM OF THE HOLE SHALL BE DUG NO DEEPER THAN THE BALL TO BE PLANTED. IF AN AUGER IS USED IN DIGGING POCKET HOLES AND POLISHED (SHINY) SIDES OCCUR IN CLAY OR HEAVY SOIL, THE USED OF SUCH AUGER SHALL BE DISCONTINUED AND THE HOLES SHALL BE DUG WITH A BACKHOE OR ANOTHER APPROVED METHOD.

CMS ITEM 661.10B: PLANTING BEDS

ALL PLANT BEDS SHALL BE ACCORDANCE WITH ODOT ITEM 661 UNLESS OTHERWISE NOTED. THE MONTH PRIOR TO CULTIVATION AND PLANTING ALL SHRUB BEDS WILL BE TREATED WITH ROUNDUP BRAND HERBICIDE OR AN APPROVED EQUAL IF WEEDS ARE PRESENT. AFTER VEGETATION PLACEMENT AND FERTILIZING HAVE BEEN COMPLETED AND APPROVED, THE LANDSCAPE BEDS WILL BE TREATED WITH SURFLAN BRAND HERBICIDE OR AN APPROVED EQUAL. THE RATE AND METHOD OF APPLICATION SHALL BE IN STRICT CONFORMANCE WITH THE MANUFACTURERS PRODUCT LABEL AND CONSISTENT WITH CURRENT PRACTICES FOR ROADSIDE MANAGEMENT. THIS WORK SHALL BE ACCOMPLISHED UNDER THE DIRECT SUPERVISION OF A PESTICIDE APPLICATOR LICENSED BY THE STATE OF OHIO. AFTER THE LAYOUT IS APPROVED BY THE PROJECT ENGINEER, ALL PLANTING BED AREAS SHALL BE CULTIVATED/TILLED TO A MINIMUM DEPTH OF 6" (TILLING TOPSOIL INTO EXISTING SOIL.) USING A PLOW, DISC, OR ROTOTILLER.

SPECIAL MISC.: FERTILIZER PACKETS

FOUR OUNCE (3-YEAR) COMMERCIAL FERTILIZED PACKETS USED IN PLANTING OPERATION SHALL BE DELIVERED DRY IN ORIGINAL, UNOPENED CONTAINERS. FERTILIZER ANALYSIS SHALL BE 16% NITROGEN, 8% PHOSPHORIC ACID AND 16% POTASH. FERTILIZER SHALL BE OF A SLOW RELEASE TYPE IN A POLYETHYLENE PERFORATED PACKET WITH MICROPORE HOLES.

THE PACKETS SHALL BE PLACED 6 TO 8 INCHES DEEP AND EVENLY SPACED AROUND THE PERIMETER OF THE PLANTING HOLE. ADJACENT TO THE BALL OR ROOT MASS, BUT NOT IN DIRECT CONTACT WITH THE ROOTS. THE PACKETS SHALL NOT BE CUT, RIPPED OR DAMAGED. EACH SHRUB OR TREE SHALL BE FERTILIZED ACCORDING TO THE FOLLOWING SCHEDULE:

SHRUBS 2' - 3'	2 PACKETS
SHRUBS 3' - 4'	3 PACKETS
TREES 2" - 3" CAL.	3 PACKETS
EVERGREEN TREES	3 PACKETS

IF IT BECOMES NECESSARY TO REMOVED AND REPLACE MISSING, DEAD, OR UNHEALTHY PLANTS, ALL OLD PACKETS SHALL BE REPLACED WITH NEW PACKETS. AN ESTIMATED QUANTITY OF 61 EACH HAS BEEN CARRIED OVER TO THE GENERAL SUMMARY.

CMS ITEM 661.11: MULCH

MULCH SHALL BE A FINELY SHREDDED HARDWOOD MULCH OF UNIFORM TEXTURE AND SIZE AND SHALL BE A SLOW DECOMPOSING ALL ORGANIC MATERIAL. IT SHALL NOT CONTAIN AN EXCESSIVE AMOUNT OF ACID THAT MAY ADVERSELY AFFECT PLANT GROWTH. SHREDDED MULCH SHALL BE AGED OR DYED TO BE UNIFORMLY DARK BROWN IN COLOR. MULCH APPLICATION SHALL BE RAKED SMOOTH, PRE-EMERGENT HERBICIDE APPLIED, AND THEN MULCHED TO A DEPTH OF 3", AND THEN THOROUGHLY WATERED. WOOD SHAVINGS, PEAT MOSS, OR CORN COBS SHALL NOT BE USED IN TOP MULCH. SHREDDED HARDWOOD SHALL BE AGED (STOCKPILED) AT LEAST SIX MONTHS PRIOR TO PLACEMENT AROUND PLANTS AND ARE TO BE FREE OF ALL ASH SPECIES MATERIAL. MULCH SHALL BE AS NOTED ON DETAILS. MULCH SHALL BE PLACED TO A DEPTH OF 3". MULCH BEDS SHALL HAVE A NEAT, EDGED APPEARANCE.

CMS ITEM 661.13: BRACING

BRACING SHALL BE AS PER PLANTING DETAILS ON SHEET 103.

CMS ITEM 661.14: PERIOD OF ESTABLISHMENT MAINTENANCE:

DURING PLANTING: MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS PLANTED AND SHALL CONTINUE UNTIL THE PROJECT IS COMPLETE AND ACCEPTED BY MIAMI TOWNSHIP. PLANTS SHALL BE WATERED, MULCHED AND PRUNED, WEED GROWTH CONTROLLED AND OTHERWISE MAINTAINED AS NEEDED. SETTLED PLANTS SHALL BE RAISED AND REALIGNED AND GUY WIRES TIGHTENED AND REPAIRED.

AFTER PLANTING: MIAMI TOWNSHIP WILL BEGIN MAINTENANCE UPON PROJECT ACCEPTANCE. IT SHALL BE THE RESPONSIBILITY OF MIAMI TOWNSHIP TO WEED LANDSCAPE AREAS, MULCH AND PRUNE AS NECESSARY FOR THE CONTINUOUS VIGOR OF THE PLANTS.

ADDITIONALLY, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO WATER AS NECESSARY FOR THE CONTINUOUS VIGOR OF THE PLANTS DURING THE WARRANTY PERIOD. THE COST OF WATERING WILL BE AT THE SOLE COST OF THE CONTRACTOR.

WARRANTY:

THE CONTRACTOR SHALL WARRANTY ALL PLANTS TO BE IN SATISFACTORY GROWING CONDITION AND TO LIVE FOR A PERIOD OF ONE YEAR FROM COMPLETION OF THE PROJECT. ALL PLANTS INSTALLED PRIOR TO DECEMBER 31ST SHALL BE GUARANTEED TO BREAK INTO GROWTH (NOT JUST BUD BREAK), THE FOLLOWING SPRING. PLANTS WILL BE REPLACED ONCE DURING THE GUARANTEE PERIOD. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO WATER AS NECESSARY FOR THE CONTINUOUS VIGOR OF THE PLANTS DURING THE WARRANTY PERIOD. THE COST OF WATERING WILL BE AT THE SOLE COST OF THE CONTRACTOR. REPLANT AS REQUIRED ACCORDING TO THE SPECIFICATIONS OF THE ORIGINAL MATERIAL. REPLACEMENT PLANTS ARE SUBJECT TO A NEW PERIOD OF ESTABLISHMENT.

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ITEM 661 - DECIDUOUS SHRUB, 3' HEIGHT, AS PER PLAN

ALL LABOR AND MATERIALS NECESSARY TO PLANT NEW SHRUBS SHALL BE INCLUDED IN THE UNIT PRICE OF THIS ITEM. EXCAVATION AND PLANTING SHALL CONFORM TO THE SHRUB PLANTING DETAIL (DETAIL 4) OF THIS SHEET.

ITEM 661 - EVERGREEN SHRUB, 18" HEIGHT, AS PER PLAN

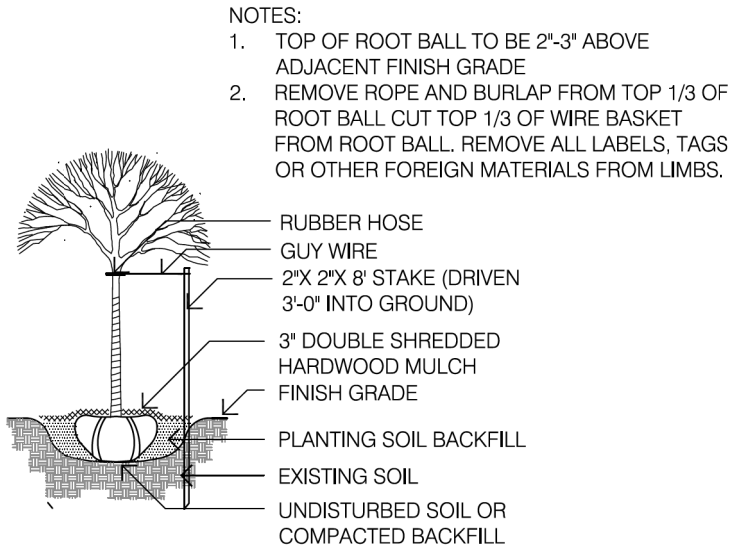
ALL LABOR AND MATERIALS NECESSARY TO PLANT NEW SHRUBS SHALL BE INCLUDED IN THE UNIT PRICE OF THIS ITEM. EXCAVATION AND PLANTING SHALL CONFORM TO THE SHRUB PLANTING DETAIL (DETAIL 4) OF THIS SHEET.

ITEM 661 - ORNAMENTAL TREE, 2" CAL., AS PER PLAN

ALL LABOR AND MATERIALS NECESSARY TO PLANT NEW TREES SHALL BE INCLUDED IN THE UNIT PRICE OF THIS ITEM. EXCAVATION AND PLANTING SHALL CONFORM TO THE TREE PLANTING DETAIL (DETAIL 1 OR 2) OF THIS SHEET.

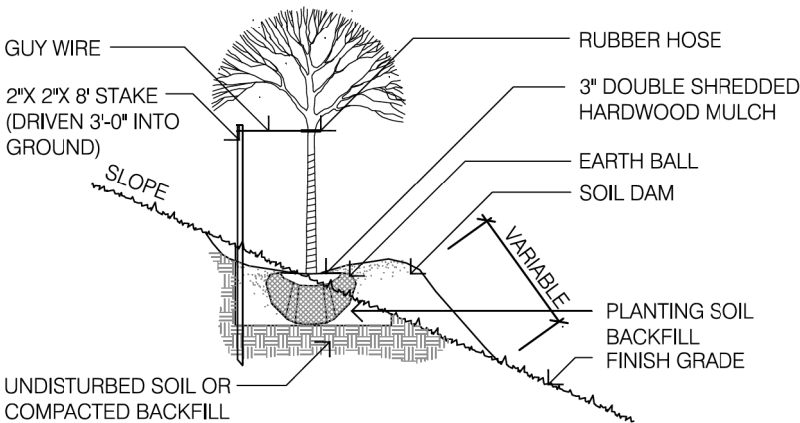
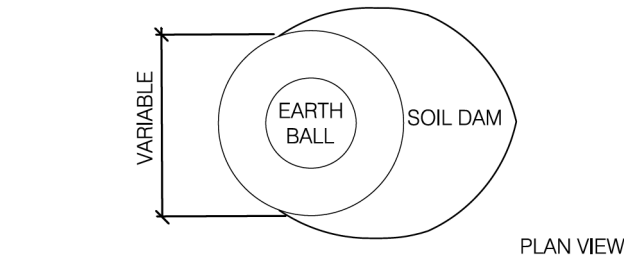
ITEM 661 - DECIDUOUS TREE, 3" CAL., AS PER PLAN

ALL LABOR AND MATERIALS NECESSARY TO PLANT NEW TREES SHALL BE INCLUDED IN THE UNIT PRICE OF THIS ITEM. EXCAVATION AND PLANTING SHALL CONFORM TO THE TREE PLANTING DETAIL (DETAIL 1 OR 2) OF THIS SHEET.

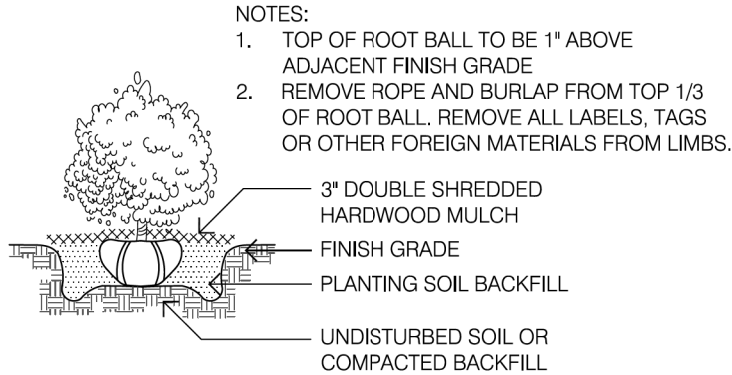


1 TREE PLANTING DETAIL
SCALE: NOT TO SCALE

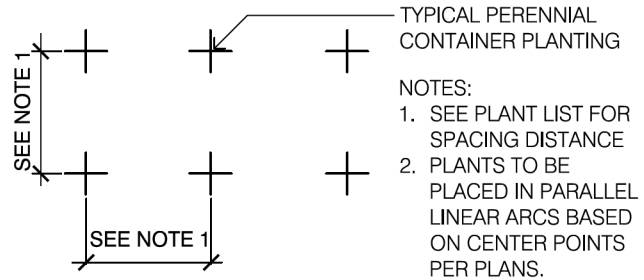
- NOTES:
1. TOP OF ROOT BALL TO BE 2"-3" ABOVE ADJACENT FINISH GRADE
 2. REMOVE ROPE AND BURLAP FROM TOP 1/3 OF ROOT BALL CUT TOP 1/3 OF WIRE BASKET FROM ROOT BALL. REMOVE ALL LABELS, TAGS OR OTHER FOREIGN MATERIALS FROM LIMBS.



2 TREE PLANTING ON SLOPE DETAIL
SCALE: NOT TO SCALE



4 SHRUB PLANTING DETAIL
SCALE: NOT TO SCALE



5 PERENNIAL PLANT SPACING DETAIL
SCALE: NOT TO SCALE

CALCULATED
JRM
CHECKED
BMG

LANDSCAPE DETAILS

MOT-75-0.76

103
106

IRRIGATION NOTES

1. REFER TO STANDARD IRRIGATION DETAILS ON THIS SHEET FOR INTENDED CONSTRUCTION METHODS

2. THIS SYSTEM IS DIAGRAMMATIC BASED UPON INFORMATION PROVIDED BY MIAMI TOWNSHIP. INSTALL A SYSTEM THAT WILL PROPERLY COVER ALL AREAS INDICATED ON THE DESIGN. ANY DISCREPANCIES OR CHANGES (I.E., POC SIZE, LAWN OR PLANT AREAS, STATIC PRESSURE, ETC.) SHOULD BE POINTED OUT TO MIAMI TOWNSHIP AND CHANGES MADE WITH APPROVAL.

3. THIS SYSTEM SHALL BE INSTALLED USING ACCEPTED AND QUALITY INSTALLATION STANDARDS AS USED IN THE INDUSTRY. ALL MANUFACTURERS SPECIFICATIONS WILL BE FOLLOWED.

4. MAINLINE PIPING SHALL BE BURIED A MINIMUM OF 12" OF COVER AND A MAXIMUM OF 18" OF COVER. LATERAL LINE PIPING A MINIMUM OF 12" OF COVER, ALL BACKFILL SURROUNDING THE PIPE SHALL BE SCREENED AND CLEARED OF MATERIAL LARGER THAN 1" IN SIZE. BACKFILLED SHALL BE ADDED IN 6" INCREMENTS AND MECHANICALLY TAMPED.

5. SYSTEM DESIGN IS BASED ON 34 GPM AT 70 PSI PROVIDED BY SEVERAL NEW 1.5" METERS AND METER PITS BY CITY. SEE PLANS FOR LOCATIONS. POWER TO THE CONTROLLER AND ALL WIRING TO THE METER BY CITY. IRRIGATION CONTRACTOR IS TO INSTALL AND COORDINATE ALL HARDWARE INSTALLATION FOR THE CONTROLLERS AND METER. INSTALL IN STAINLESS STEEL CABINET AS SHOWN IN DETAIL.

6. UNMARKED LATERAL PIPING SHALL BE 1" CL-200 PVC PIPE UNLESS OTHERWISE NOTED.

7. PIPE SHOWN IN PAVED AREA WITHOUT SLEEVE IS DIAGRAMMATICAL AND SHALL BE LOCATED INSIDE OF PAINTED AREA APPROXIMATELY 1' FROM HARDSCAPE.

8. ALL VALVES SHALL BE AN AMETEK VALVE OR APPROVED EQUAL. ALL ELECTRICAL CONNECTIONS AND SPLICES SHALL BE SEALED WITH WATERPROOF CONNECTIONS.

9. CONTROL WIRE WILL BE SOLID COPPER WIRE U.L APPROVED FOR DIRECT BURIAL IN GROUND. MINIMUM GAUGE #14 U.F (FOR ALL HOT WIRES) AND #12 GAUGE SINGLE STRAND FOR DISTANCES OVER 1500'. COMMON WIRE SHALL BE WHITE. THE TWO-WIRE CONTROLLER SHALL USE WIRE AS SPECIFIED BY THE MANUFACTURER. INSTALL GROUNDING FOR THE TWO WIRE EVERY 500' AND AT THE CONTROLLER.

10. NOZZLE SIZES AS SHOWN IN THE LEGEND ARE TO BE FOLLOWED CLOSELY

11. USE 12" POP UPS IN ALL BED AREAS. USE BUBBLERS AT TREE LOCATIONS AS SHOWN ON PLAN.

12. COORDINATE THE FINAL LOCATION OF CONTROLLER ENCLOSURES AS DIRECTED BY MIAMI TOWNSHIP.

13. ALL PIPE SLEEVES SHALL BE 2X THE DIAMETER OF THE PIPE UNLESS OTHERWISE NOTED.

14. PIPES ARE MARKED AT TRANSITION ONLY UNLESS OTHERWISE NOTED.

15. IRRIGATION PRODUCTS (I.E SPRINKLERS, VALVES, CONTROLLERS) SHALL BE AS LISTED IN THE LEGEND BY A SINGLE MANUFACTURER AND SHALL BE SUPPLIED BY THE REGIONAL AUTHORIZED DISTRIBUTOR TO PROVIDE SINGLE SOURCE RESPONSIBILITY FOR WARRANTY SERVICE AND SUPPORT AND TO ASSURE COMPATIBILITY IN ALL RESPECTS. NO SUBSTITUTIONS ARE ALLOWED WITHOUT FIRST SUBMITTING SUBSTITUTE PRODUCT TO PROJECT ENGINEER, MIAMI TOWNSHIP, AND RECEIVING WRITTEN APPROVAL. SUBSTITUTE PRODUCTS MUST BE EQUAL IN PERFORMANCE AND CONSTRUCTION AND SHOW A COST SAVINGS TO THE OWNER. UNAPPROVED PRODUCT SHALL BE REMOVED AT NO COST TO THE OWNER.

16. CONTRACTOR TO INCLUDE IN BID THE FIRST WINTERIZATION AND THE FIRST SPRING TURN ON. WINTERIZATION INCLUDED SHUTTING DOWN ALL IRRIGATION TAPS FOR THE SEASON. INSTRUCT MIAMI TOWNSHIP ON MAINTAINING THE IRRIGATION SYSTEM AND ALL OF THE COMPONENTS THEREOF AFTER THE 1-YEAR WARRANTY PERIOD.

17. CONTRACTOR IS TO PROVIDE AS BUILT DRAWINGS PRIOR TO FINAL PAYMENT.

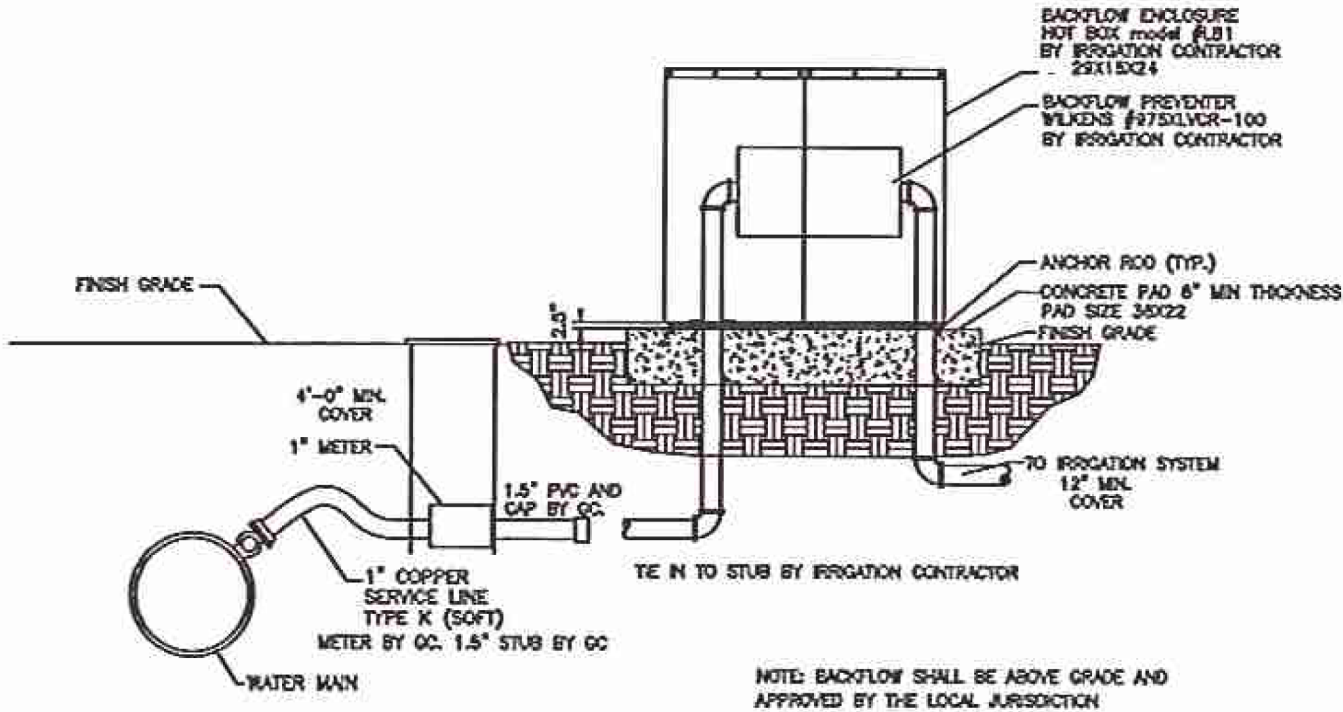
THE REMOVAL OF THE EXISTING IRRIGATOIN LINE WITH SPRINKLERS AS SPECIFIED ON SHEETS 105-106 IS INCLUDED WITH THE COMPLETE IRRIGATION SYSTEM BID ITEM.

ALL MATERIALS NECESSARY FOR IRRIGATION HAVE BEEN INCLUDED ON SHEET 106. IRRIGATION SYSTEM WILL BE PAID FOR UNDER THE FOLLOWING:

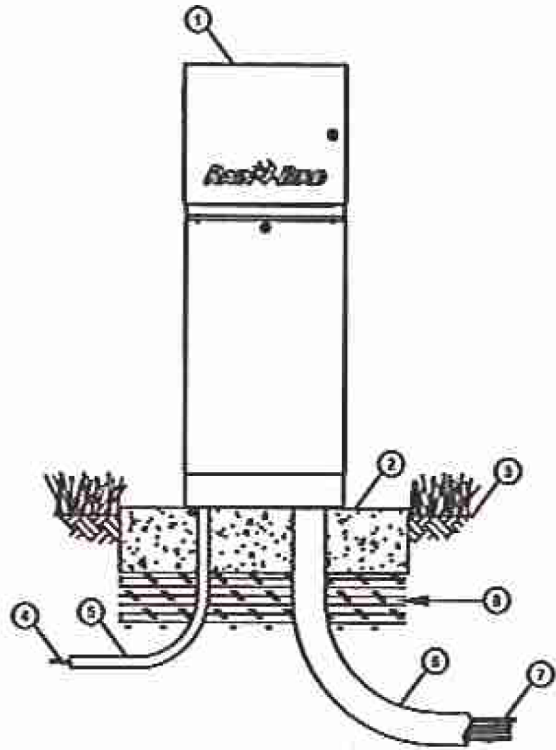
ITEM 680 - SPECIAL - COMPLETE IRRIGATION SYSTEM, EACH

IRRIGATION LEGEND

RAINBIRD 1" PGA-100 1" VALVE RAINBIRD 1804 4" POP UP



01 IRRIGATION POINT OF CONNECTION N.T.S.



02 IQ-PEDP-1-T7-CM1-NA-IQ24 CONTROLLER N.T.S.

DETAIL-FILE

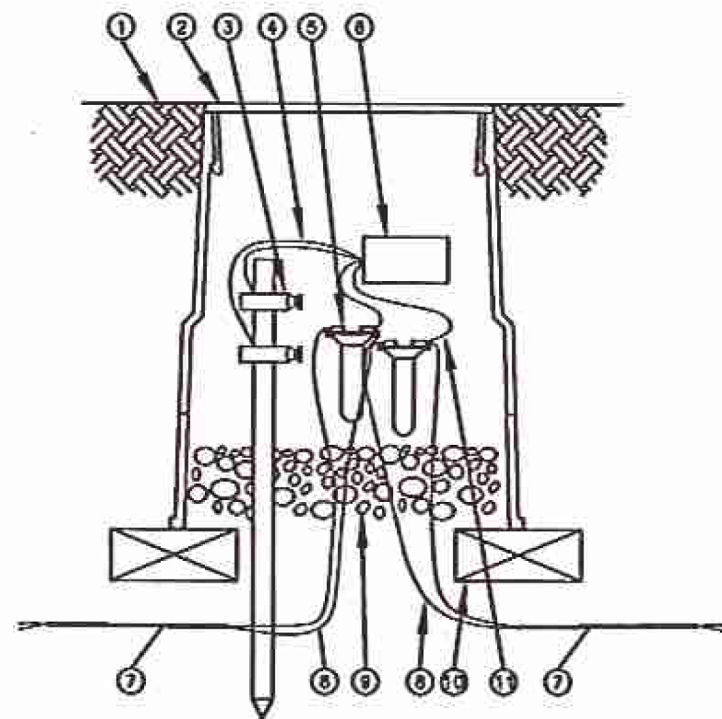
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IRRIGATION NOTES AND DETAILS

MOT-75-0.76

104
106

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- ① FINISH GRADE / TOP OF MULCH
- ② VALVE BOX WITH COVER: 10-INCH ROUND SIZE
- ③ GROUNDING ROD: 50 OHMS OR LESS
- ④ WIRE TO GROUNDING ROD (1 OF 2)
- ⑤ WATER PROOF CONNECTION (1 OF 2)
- ⑥ SURGE PROTECTION
- ⑦ TWO-WIRE CABLE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER,
- ⑧ COMMUNICATION WIRE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER,
- ⑨ 3-INCH MIN. DEPTH OF 3/4-INCH WASHED GRAVEL
- ⑩ BRICK (1 OF 2)
- ⑪ WIRE

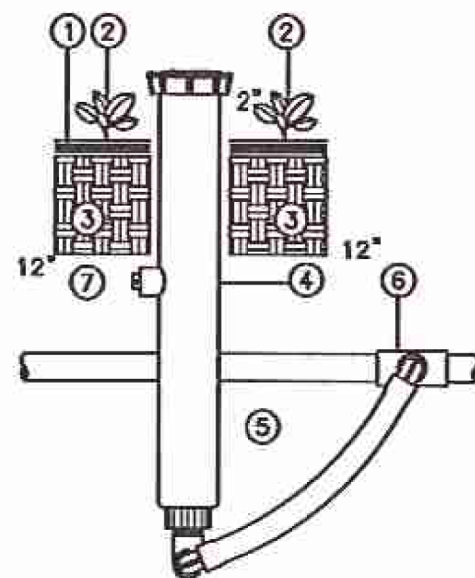
NOTES:
FOLLOW MANUFACTURERS RECOMMENDATIONS FOR DISTANCE BETWEEN SURGE PROTECTORS.

03 SURGE PROTECTION FOR TWO WIRE

N.T.S.

DETAIL-FILE

NOZZLE: MPR, VAN & ROTARY.



- ① FINISH GRADE OR TOP OF MULCH.
- ② PLANT MATERIAL (SHRUB/G.C.).
- ③ CLEAN SOIL, AMENDED/NATIVE, FREE OF ROCK AND DEBRIS.
- ④ 12" POP-UP SPRAY SPRINKLER BODY, INSTALL IN SHRUB AND GROUND COVER AREAS.
- ⑤ SWING PIPE
- ⑥ TEE/EL, PVC SCH40 LINE SIZE, (FIP), SIZE PER SPRINKLER INLET.
- ⑦ PVC LATERAL (NON-PRESSURE PIPE). SIZE PER PLAN.

INSTALL POPUP SPRAY SPRINKLER 4" FROM PAVED EDGE, BUILDINGS AND FENCE AREAS, AND INSTALL 2" ABOVE GRADE IN PLANTER BEDS FOR SHRUBS/GROUND COVER, ADJUST COVERAGE TO AVOID OVERSPRAY.

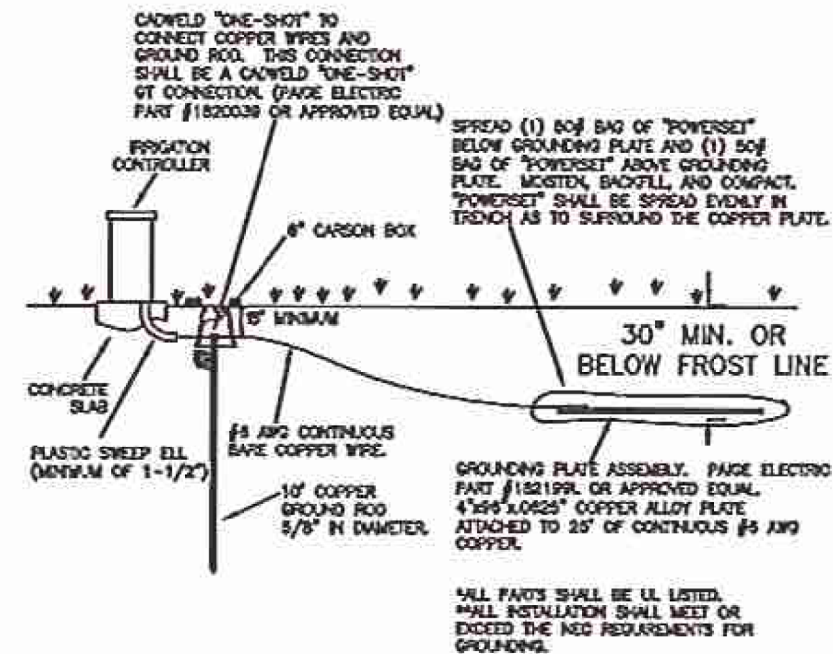
USE ONLY TEFLON TAPE OR SEALANT ON ALL THREADED CONNECTIONS.

05 12" POP UP FOR LANDSCAPING

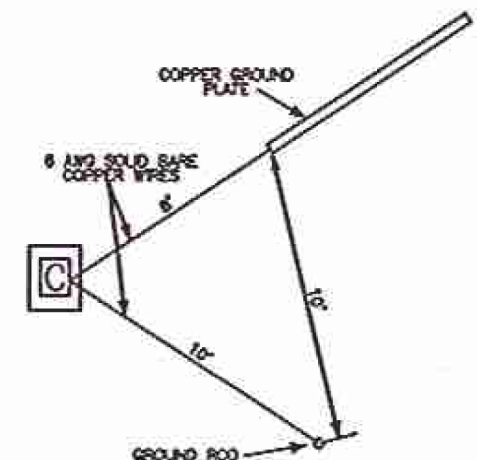
N.T.S.

DETAIL-FILE

Side View



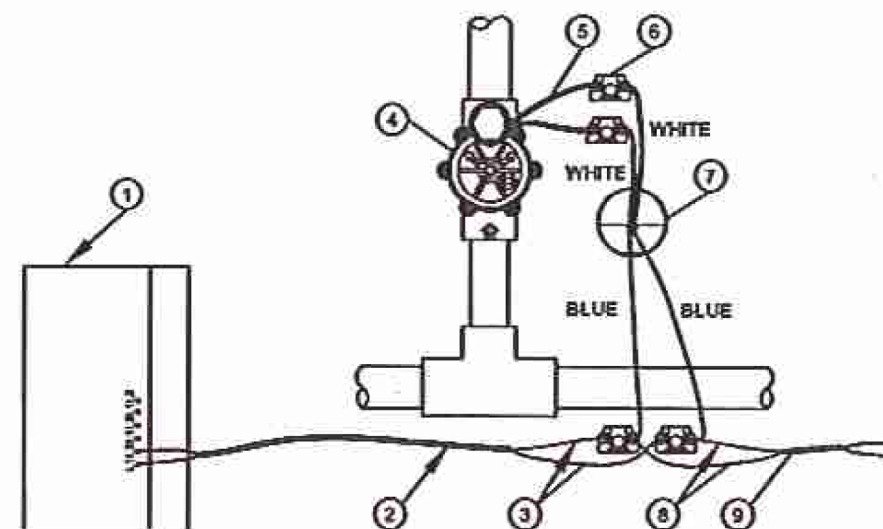
Top View



04 CONTROLLER GROUNDING ALL LOCATIONS

N.T.S.

DETAIL-FILE



- ① RAIN BIRD LXD CONTROLLER
- ② TWO-WIRE TO LXD CONTROLLER
- ③ COMMUNICATION WIRE TO LXD CONTROLLER
- ④ SOLENOID VALVE OR MASTER VALVE
- ⑤ SOLENOID WIRE (1 OF 2)
- ⑥ DBY CONNECTORS (1 OF 2)
- ⑦ RAIN BIRD FD-101TURF M13011 DECODER
- ⑧ COMMUNICATION WIRE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LSP-1 OR NDC)
- ⑨ TWO WIRE CABLE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LSP-1 OR NDC)

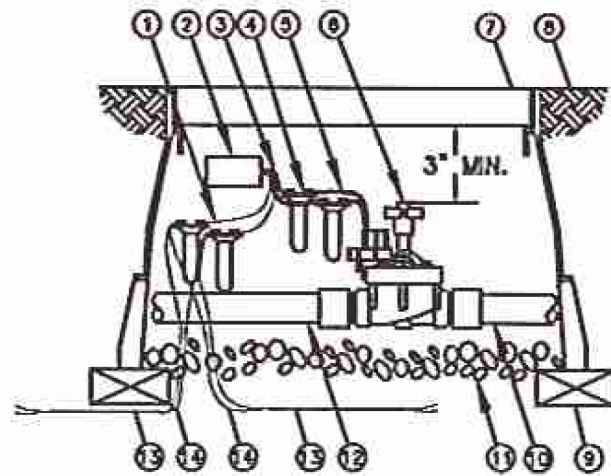
NOTE:
MAXIMUM LENGTH OF SECONDARY WIRE PATH (14 AWG) FROM FIELD DECODER TO SOLENOID IS 450-Feet.

07 DECODER WIRING

N.T.S.

DETAIL-FILE

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NOTES:

1. SECONDARY WIRE RUN - DISTANCE BETWEEN SOLENOID AND FIELD DECODER - NOT TO EXCEED 450-FEET WITH 14 GAUGE WIRE.
2. PLACE 3-FEET OF EXTRA WIRE IN EVERY VALVE BOX FOR EASIER SERVING.

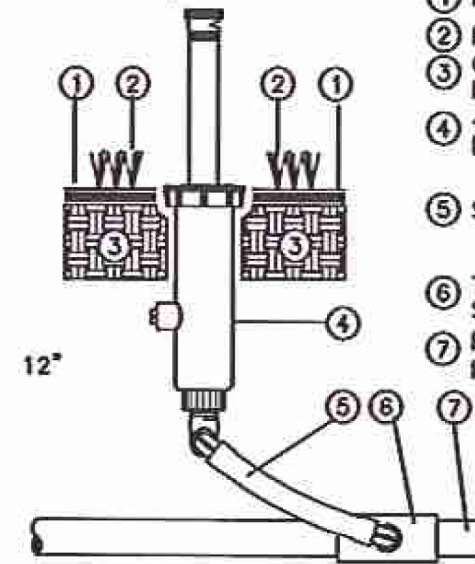
- 1 BLUE WIRE FROM DECODER (1 OF 2)
- 2 DECODER
- 3 WHITE WIRE FROM FD-102TURF DECODER (1 OF 2)
- 4 DRY WATER PROOF CONNECTION (1 OF 4)
- 5 SOLENOID WIRE (1 OF 2)
- 6 REMOTE CONTROL VALVE
- 7 VALVE BOX WITH COVER: 12-INCH SIZE
- 8 FINISH GRADE / TOP OF MULCH
- 9 BRICK (1 OF 4)
- 10 PVC MAINLINE PIPE
- 11 3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
- 12 PVC LATERAL PIPE
- 13 TWO-WIRE CABLE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LSP-1 OR MDC)
- 14 COMMUNICATION WIRE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LSP-1 OR LXD)

08 ELECTRIC VALVE AND DECODER

N.T.S.

DETAIL-FILE

NOZZLE: MPR, VAN & ROTARY.



- 1 FINISH GRADE.
- 2 PLANT MATERIAL (TURF).
- 3 CLEAN SOIL, AMENDED/NATIVE, FREE OF ROCK AND DEBRIS
- 4 4" POP-UP SPRAY SPRINKLER BODY, INSTALL IN TURF AREAS.
- 5 SWING PIPE
- 6 TEE/EL, PVC SCH40 LINE SIZE, SIZE PER SPRINKLER INLET
- 7 PVC LATERAL (NON-PRESSURE PIPE). SIZE PER PLAN.

INSTALL POPUP SPRAY SPRINKLER 4" FROM PAVED EDGE, BUILDINGS AND FENCE AREAS, AND INSTALL FLUSH TO GRADE, ADJUST COVERAGE TO AVOID OVERSPRAY ONTO PAVED SURFACES, FENCES, BUILDINGS AND PARKING LOTS.

USE ONLY TEFLON TAPE OR SEALANT ON ALL THREADED CONNECTIONS.

09 4" POP UP WITH MPR NOZZLE

N.T.S.

DETAIL-FILE

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LEGEND

- 1 EXISTING IRRIGATION LINE WITH SPRINKLERS TO BE REMOVED
- 2 PROPOSED IRRIGATION LINE WITH RAINBIRD 1804 4" POP UP (SPRINKLER HEADS AT 12' SPACING)
- 3 PROPOSED 2" IRRIGATION MAINLINE
- 4 NOT USED
- 5 PROPOSED IRRIGATION VALVES
- 6 REMOVE & REPLACE TREES (3 SYCAMORE AND 8 WINTER KING HAWTHORN (WKH)) AT A 3.75' OFFSET FROM BACK OF BIKEWAY. SEE PLANTING DETAIL ON SHEET 103.
- 7 REMOVE AND REPLACE SHRUBS (4 BROADMOOR JUNIPER, 5 KNOCK OUT ROSE)

ITEM	EXT	DESCRIPTION	QTY	UNIT
661	20061	DECIDUOUS SHRUB, 3' HEIGHT (KNOCK OUT ROSE), AS PER PLAN	5	EACH
661	30041	EVERGREEN SHRUB, 18" HEIGHT (BROADMOOR JUNIPER), AS PER PLAN	4	EACH
661	40081	DECIDUOUS TREE, 2" CAL. (WINTER KING HAWTHORN), AS PER PLAN	8	EACH
661	40121	DECIDUOUS TREE, 3" CAL. (SYCAMORE), AS PER PLAN	3	EACH

THE ABOVE QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY

0

20

40

10

HORIZONTAL

SCALE IN FEET

CALCULATED

JRM

CHECKED

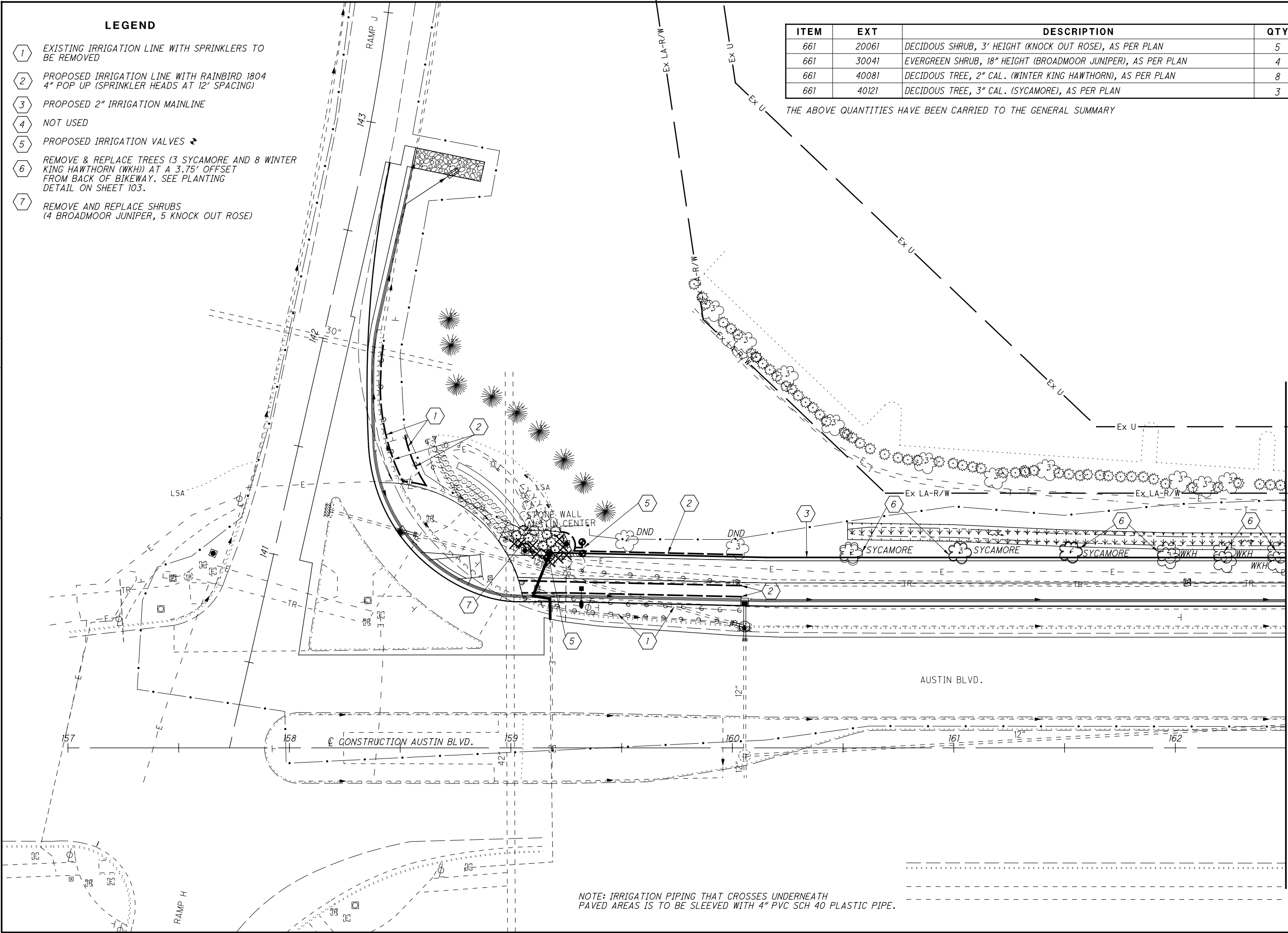
BMG

LANDSCAPE AND IRRIGATION PLAN

AUSTIN BLVD. STA. 158+00.00 TO STA. 162+50.00

MOT-75-0.76

105
106



NOTE: IRRIGATION PIPING THAT CROSSES UNDERNEATH PAVED AREAS IS TO BE SLEEVED WITH 4" PVC SCH 40 PLASTIC PIPE.

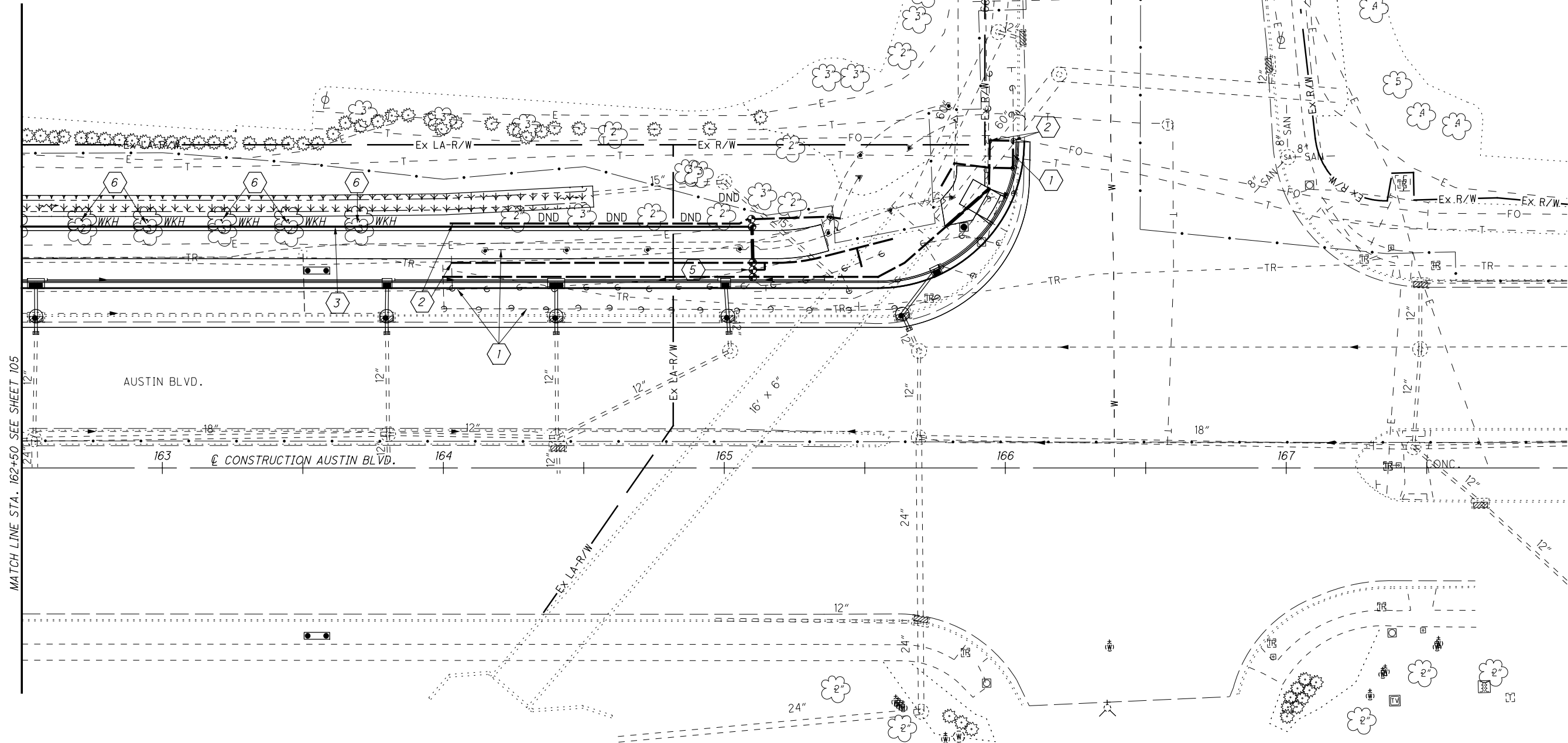
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LEGEND

- 1 EXISTING IRRIGATION LINE WITH SPRINKLERS TO BE REMOVED
- 2 PROPOSED IRRIGATION LINE WITH RAINBIRD 1804 4" POP UP (SPRINKLER HEADS AT 12' SPACING)
- 3 PROPOSED 2" IRRIGATION MAINLINE
- 4 NOT USED
- 5 PROPOSED IRRIGATION VALVES
- 6 REMOVE & REPLACE TREES (3 SYCAMORE AND 8 WINTER KING HAWKTHORN (WKH)) AT A 3.75' OFFSET FROM BACK OF BIKEWAY. SEE PLANTING DETAIL ON SHEET 103.
- 7 REMOVE AND REPLACE SHRUBS (4 BROADMOOR JUNIPER, 5 KNOCK OUT ROSE)

GRAND TOTAL	UNIT	DESCRIPTION
974	FT	200 PSI SDR 21 PVC LATERAL PIPE (SIZED PER PLAN)
629	FT	200 PSI SDR 21 PVC MAINLINE PIPE (SIZED PER PLAN)
EXISTING	FT	PVC SCH. 40 PLASTIC PIPE FOR SLEEVES
10	EACH	1" ZONE CONTROL VALVE
81	EACH	4" POP UP SPRAY WITH NOZZLE
3	EACH	12" POP UP SPRAY W/ROTATOR NOZZLE
2	EACH	BUBBLERS

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE LISTED WORK:
ITEM 680 - SPECIAL - COMPLETE IRRIGATION SYSTEM, EACH



NOTE: IRRIGATION PIPING THAT CROSSES UNDERNEATH PAVED AREAS IS TO BE SLEEVED WITH 4" PVC SCH 40 PLASTIC PIPE.



CALCULATED JRM
CHECKED BMG

LANDSCAPE AND IRRIGATION PLAN
AUSTIN BLVD. STA. 162+50.00 TO STA. 168+00.00

MOT-75-0.76

106
106

PROJECT DESCRIPTION

THIS PROJECT WILL CONSTRUCT AN ADDITIONAL WESTBOUND RIGHT TURN LANE, CURB AND GUTTER, AND RELOCATE THE BIKEPATH FOR APPROXIMATELY 700’ BETWEEN AUSTIN LANDING AND THE I-75 NORTHBOUND ENTRANCE RAMP. THIS PROJECT WILL ALSO INCLUDE PROPOSED STORM SEWER, PAVEMENT OVERLAY, REPLACE SIGNALS AND REVISE TRAFFIC CONTROL TO ACCOMODATE THE ADDITIONAL LANE. SR-741 TRAFFIC CONTROL WILL BE REVISED.

HISTORIC RECORDS

CONSTRUCTION RECORDS FROM MOT-75-0.75 PID 77246 AND MOT-741-0.76 PID 92035 WERE REVIEWED INDICATING THE EXISTENCE OF BORING INFORMATION FOR THE CENTERLINE ALIGNMENT OF AUSTIN BOULEVARD AND STATE ROUTE 741. BORING LOGS FROM THE 2009 AND 2016 PLANS WERE AVAILABLE, BUT NOT PRESENTED FOR CLARITY.

GEOLOGY

THE PROJECT IS LOCATED WITHIN THE SOUTHERN OHIO LOAMY TILL PLAIN REGION WHICH IS CHARACTERIZED BY STREAM VALLEYS FILLED WITH OUTWASH THAT ALTERNATE BETWEEN BROAD FLOODPLAINS AND NARROWS. THE AREA IS CHARACTERIZED BY GLACIALLY DEPOSITED SOILS. BEDROCK IS OF ORDVICIAN AGE AND RANGES FROM DOLOMITE AND LIMESTONE TO FOSSILIFEROUS SHALE AND LIMESTONE. BURIED VALLEYS CONTAINING VERY THICK GAlCIAL OUTWASH DEPOSITS ARE COMMON WITH THE AREA.

RECONNAISSANCE

A FIELD RECONNAISSANCE WAS CONDUCTED BY PAUL PAINTER FROM THE ODOT OFFICE OF GEOTEHCNICAL ENGINEERING ON NOVEMBER 23, 2017. THE CURRENT BIKE PATH PAVEMENT WAS REPORTED AS BEING IN GOOD CONDITION AND THE SURROUNDING GROUND TOPOGRAPHY WAS REPORTED TO HAVE NO SIGNS OF INSTABILITY. SURROUNDING LAND USAGE WAS NOTED AS BEING COMMERCIAL TO THE NORTH AND AN AIRPORT TO THE SOUTH.

SUBSURFACE EXPLORATION

THREE (3) BORINGS, B-001-0-17, B-002-0-17, AND B-003-0-17, WERE COMPLETED AS PART OF THE SUBSURFACE EXPLORATION. THE BORINGS WERE COMPLETED ON DECEMBER 27, 2017 WITH AN ATV DRILL RIG. ALL BORINGS WERE DRILLED USING A 3¾- INCH I.D. HOLLOW STEM AUGERS TO ADVANCE THE BORINGS THROUGH THE SOIL. DISTURBED SAMPLES WERE COLLECTED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206) AT CONTINUOUS INTERVALS FOR THE FULL DEPTH OF THE BORINGS.

THE HAMMER SYSTEM USED WAS LAST CALIBRATED JUNE 1, 2017, AND THE AVERAGE DRILL ROD ENERGY RATIO (ER) IS 81%.

EXPLORATION FINDINGS

THE BORINGS GENERALLY ENCOUNTERED COHESIVE SOILS. B-001 AND B-002 ENCOUNTERED STIFF TO VERY STIFF SILTY CLAY (A-6b) TO AN ELEVATION OF 930.5 AND 919.7 FEET RESPECTIVELY. BOTH BORINGS ENCOUNTERED VERY STIFF SILT AND CLAY (A-6a) MATERIAL, BENEATH THE SILTY CLAY LAYER, TO THE END OF THE BORINGS AT AN ELEVATION OF 927.5 FT AND 916.7 FT RESPECTIVELY. B-003 ENCOUNTERED STIFF, SILT AND CLAY (A-6a) MATERIAL TO AN ELEVATION OF 918.6 FT. BENEATH THE SILT AN CLAY LAYER, B-003 ENCOUNTERED VERY DENSE, COARSE AND FINE SAND (A-3a) MATERIAL TO AN ELEVATION OF 917.9 FT WHERE THE BORING WAS TERMINATED DUE TO CONTACT WITH AN UNKNOWN OBSTRUCTION.

ALL THREE BORINGS WERE ADVANCED THROUGH A LAYER OF TOPSOIL RANGING IN THICKNESS FROM 5 TO 6 INCHES. WATER WAS NOT ENCOUNTERED IN ANY OF THE BORINGS.

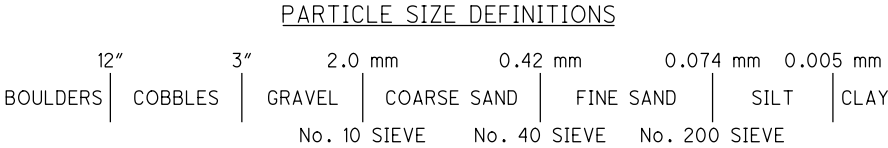
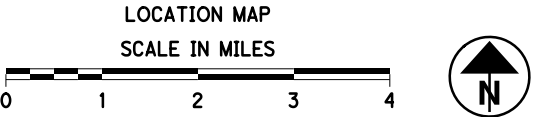
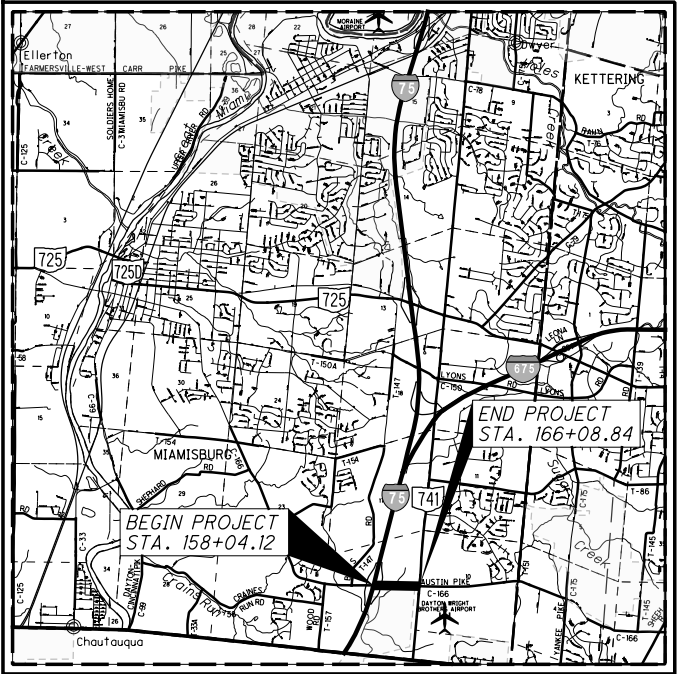
SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JULY 2017.

AVAILABLE INFORMATION

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

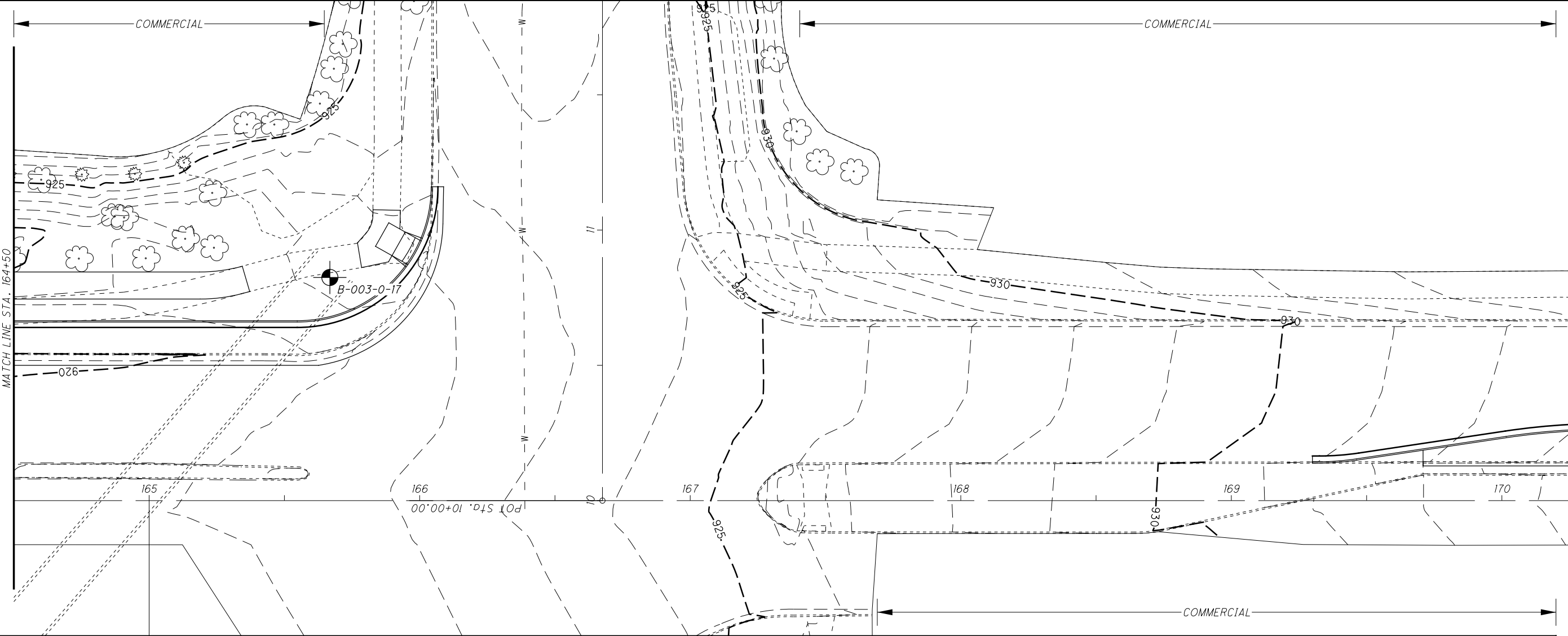
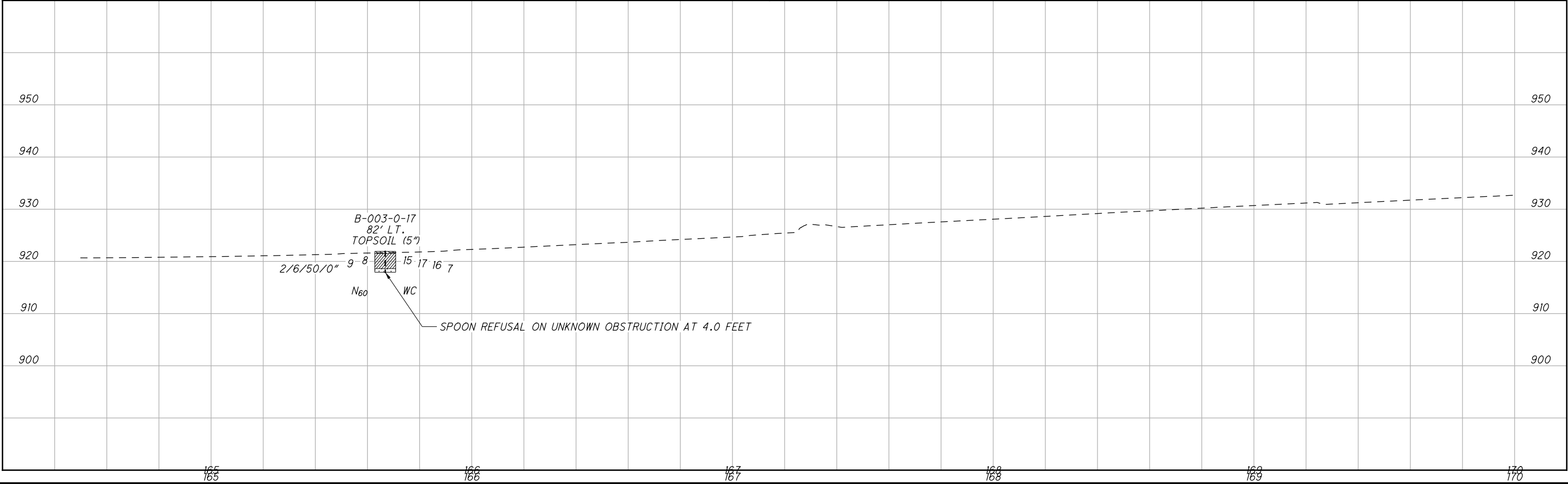
LEGEND			
	DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL
<div></div>	COARSE AND FINE SAND	<i>A-3a</i>	- 1
<div></div>	SILT AND CLAY	<i>A-6a</i>	4 3
<div></div>	SILTY CLAY	<i>A-6b</i>	2 2
		<i>TOTAL</i>	6 6
<div></div>	PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	<i>VISUAL</i>	
<div></div>	SOD AND TOPSOIL = X = APPROXIMATE THICKNESS	<i>VISUAL</i>	
<div></div>	BORING LOCATION - PLAN VIEW.		
<div></div>	DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.		
<i>WC</i>	INDICATES WATER CONTENT IN PERCENT.		
<i>N₆₀</i>	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.		
NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): <i>X/Y/D"</i> X= NUMBER OF BLOWS FOR 6 INCHES (UNCORRECTED). Y/D"= NUMBER OF BLOWS (UNCORRECTED) FOR D" OF PENETRATION AT REFUSAL.			
*	INDICATES A SAMPLE TAKEN WITHIN 3 FT OF PROPOSED GRADE.		
SS	INDICATES A SPLIT SPOON SAMPLE.		



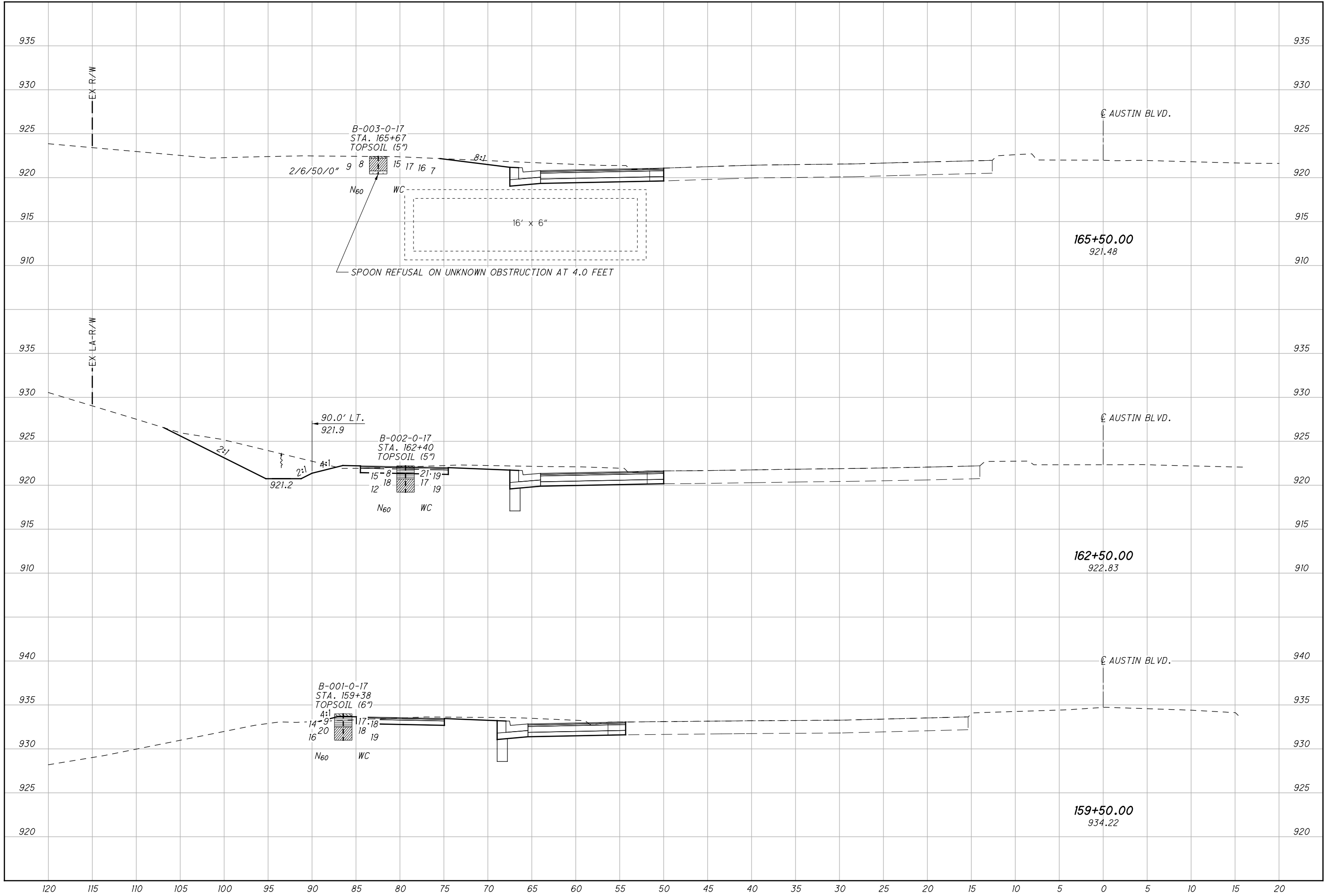
INDEX OF SHEETS					
SUMMARY OF SOIL TEST DATA, SHEET 2					
LOCATION FROM STA.	TO STA.	PLAN VIEW SHEET	PROFILE SHEET	CROSS-SECTION SHEET	CUT MAX.
AUSTIN BLVD.					
159+00	164+50	3	3	-	- FT
164+50	170+00	4	4	-	- FT
159+50, 162+50 & 165+50		-	-	5	3 FT

RECON. - PPP 11/23/17
DRILLING - DML 12/27/17
DRAWN - AJC 03/23/18
REVIEWED - SAT 03/18

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DRAWN
AJC

CHECKED
SAT

MOT-75-0-76

5 / 5

SOIL PROFILE

AUSTIN BOULEVARD CROSS SECTIONS

0 5 10

2.5

HORIZONTAL
SCALE IN FEET