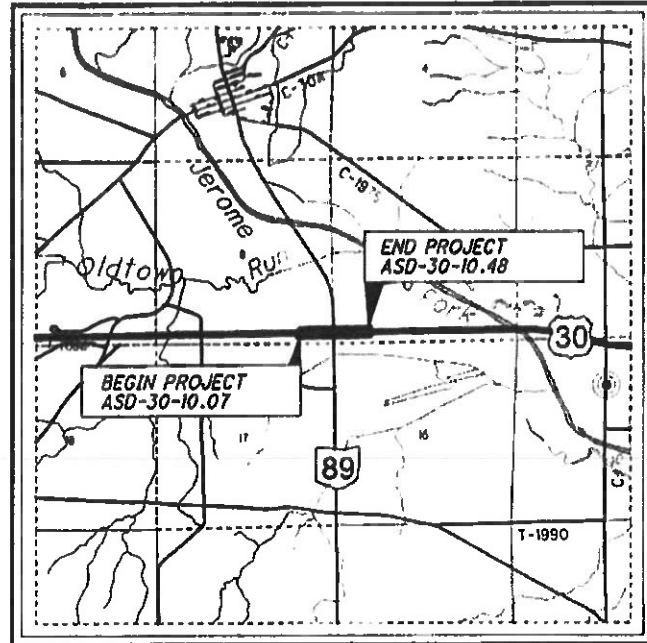


ASD - US 30-10.28
210259 PID - 110853
Dist 3 4/29/2021



LOCATION MAP

LATITUDE: N 40°47'06" LONGITUDE: W 82°11'05"

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

DESIGN DESIGNATION

	US 30	SR 89
CURRENT ADT (2021)	15,000	1,400
DESIGN YEAR ADT (2041)	21,500	1,500
DESIGN HOURLY VOLUME (2041)	2,200	150
DIRECTIONAL DISTRIBUTION	0.50	0.54
TRUCKS (24 HOUR B&C)	0.25	0.11
DESIGN SPEED	60 MPH	55 MPH
LEGAL SPEED	60 MPH	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	OTHER PRINCIPAL ARTERIAL	MAJOR COLLECTOR
NHS PROJECT	YES	NO

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES

Contact Two Working Days
Before You Dig

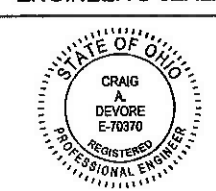


OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

PLANS PREPARED BY:

OHIO DEPARTMENT OF
TRANSPORTATION
DISTRICT THREE ENGINEERING

ENGINEER'S SEAL:



SIGNED: Craig A. Devore
DATE: 2021.0125

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

ASD-30-10.28

MOHICAN TOWNSHIP

ASHLAND COUNTY

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FEDERAL PROJECT NUMBER

E191044

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

THIS PROJECT WILL IMPROVE THE INTERSECTION OF US 30 & SR 89 IN ASHLAND COUNTY BY INSTALLING A REDUCED CONFLICT U-TURN (R-GUT), PAVEMENT MARKINGS, SIGNAGE, AND HIGHWAY LIGHTING ARE ALSO INCLUDED.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	5.425 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	5.675 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.

2019 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 REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 11.

CONFORMED SET

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	01/17/20	RM-4.2	4/17/20	MT-95.40	1/17/20	TC-42.10	10/18/13	800-2020	1/15/21
				MT-95.45	1/17/20	TC-42.20	10/18/13	808	1/18/19
CB-1.1	7/19/19	HL-10.11	1/15/21	MT-95.50	7/21/17	TC-51.11	1/15/18	813	10/19/18
		HL-10.12	1/20/17	MT-97.10	4/19/19	TC-52.10	10/18/13	821	4/20/12
DM-1.1	7/17/20	HL-10.13	4/17/20	MT-97.12	1/20/17	TC-52.20	1/15/21	825	1/17/20
DM-1.2	1/18/13	HL-20.11	1/15/21	MT-99.20	4/19/19	TC-65.10	1/17/14	832	10/19/18
DM-4.3	1/15/16	HL-30.11	1/15/21	MT-99.30	1/17/20	TC-65.11	7/21/17	908	10/20/17
DM-4.4	1/15/16	HL-30.21	4/17/20	MT-101.60	1/17/20	TC-71.10	1/19/18	913	4/21/17
		HL-30.22	1/15/21	MT-101.90	7/17/20			916	10/18/20
BP-9.1	1/18/19	HL-40.10	7/17/20	MT-102.20	4/19/19	HW-2.2	7/20/18		
		HL-40.20	7/17/20	MT-104.10	10/16/15				
MGS-1.1	1/19/18	HL-50.11	1/16/15	MT-105.10	1/17/20				
MGS-2.1	1/19/18	HL-60.11	7/21/17						
MGS-4.2	7/19/13	HL-60.12	1/15/21	TC-41.10	7/19/13				
		HL-60.31	1/17/20	TC-41.20	10/18/13				
RM-1.1	1/15/21	MT-95.30	7/19/19	TC-41.50	10/18/13				

APPROVED 
DATE 01/26/2021 DISTRICT DEPUTY DIRECTOR

APPROVED 
DATE 3/19/21 DIRECTOR, DEPARTMENT OF TRANSPORTATION

TITLE SHEET

DESIGN AGENCY



DESIGNER
MAE

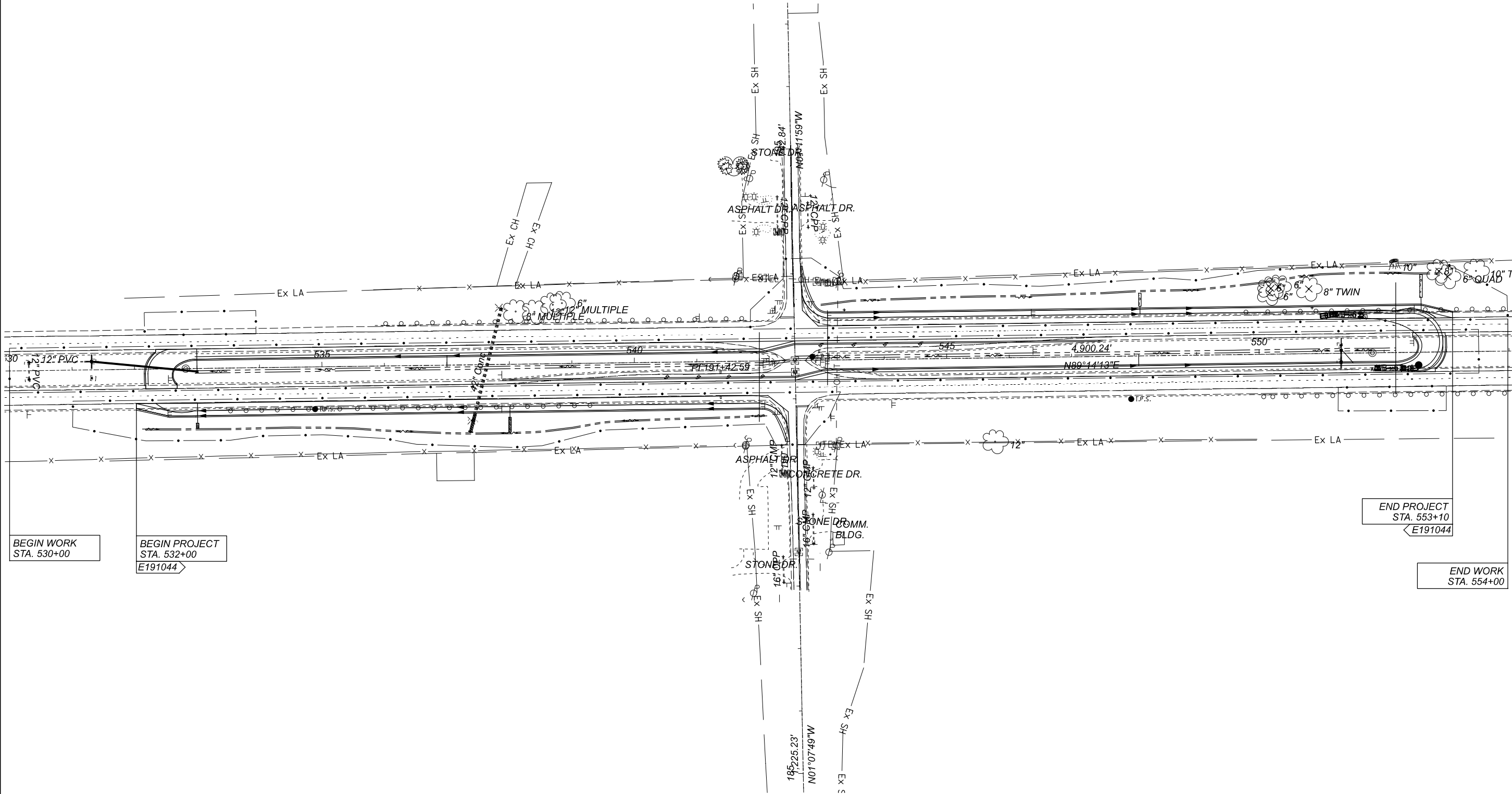
REVIEWER
CAD 01-15-21


PROJECT ID
110853

SHEET TOTAL
P.1 44

Contract Proposal available @
www.contracts.dot.state.oh.us

82-01-03-DSV






HORIZONTAL
SCALE IN FEET

0 40 80 160

DESIGN AGENCY



DESIGNER
MAE

REVIEWER

CAD 01/15/21

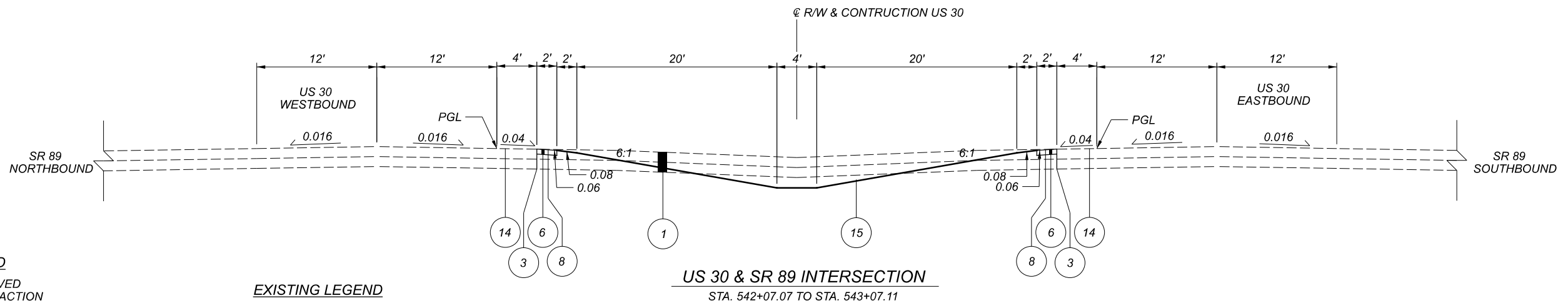
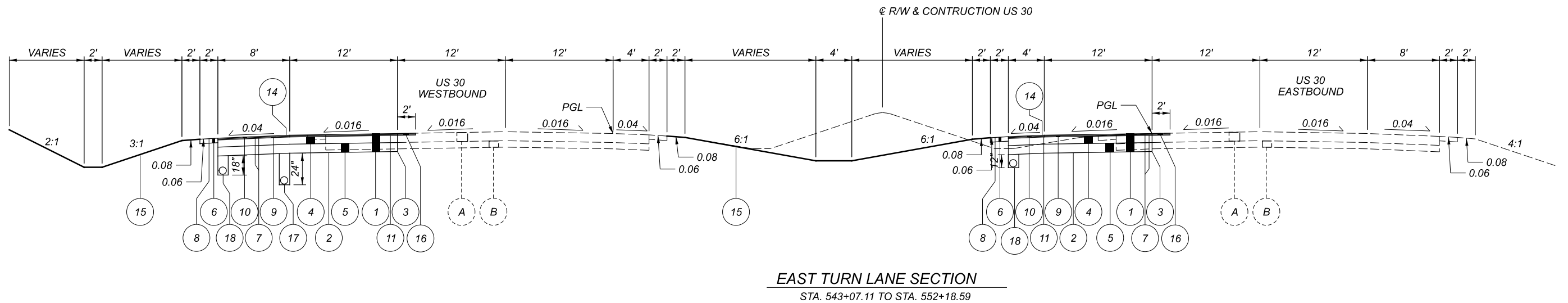
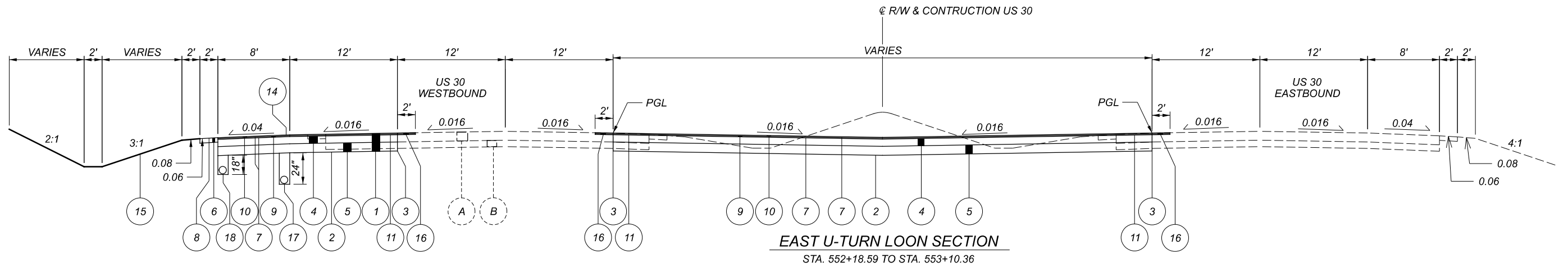
PROJECT ID
110853

SHEET
P.2

TOTAL
44

SCHEMATIC PLAN
US 30 & SR 89

- | | | | |
|---|-----------------------------------------------------------------------------------|-----|--------------------------------------|
| ① | ITEM 202 - PAVEMENT REMOVED | (A) | EXISTING ±5" ASPHALT CONCRETE |
| ② | ITEM 204 - SUBGRADE COMPACTION | (B) | EXISTING 9" REINFORCED CONCRETE BASE |
| ③ | ITEM 252 - FULL DEPTH PAVEMENT SAWING | | |
| ④ | ITEM 301 - ASPHALT CONCRETE BASE, PG64-22 (10.50") | | |
| ⑤ | ITEM 304 - AGGREGATE BASE (6") | | |
| ⑥ | ITEM 304 - AGGREGATE BASE (8") | | |
| ⑦ | ITEM 407 - NON TRACKING TACK COAT (0.05 GAL/SY) | | |
| ⑧ | ITEM 408 - PRIME COAT, AS PER PLAN (0.40 GAL/SY) | | |
| ⑨ | ITEM 442 - 2" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448) (PG76-22M) | | |
| ⑩ | ITEM 442 - 1.5" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (448) (PG76-22M) | | |
| ⑪ | ITEM SPECIAL - PAVEMENT OVERLAY COMPOSITE (30" WIDE, CENTERED OVER JOINT) | | |
| ⑫ | NOT USED | | |
| ⑬ | ITEM 304 - EMBANKMENT | | |
| ⑭ | ITEM 618 - RUMBLE STRIP (ASPHALT CONCRETE) | | |
| ⑮ | ITEM 659 - SEEDING AND MULCHING | | |
| ⑯ | ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (3.5") | | |
| ⑰ | ITEM 605 - 4" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (24" DEEP) | | |
| ⑱ | ITEM 605 - 4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (12" & 18" DEEP) | | |

**PROPOSED LEGEND**

- ① ITEM 202 - PAVEMENT REMOVED
- ② ITEM 204 - SUBGRADE COMPACTION
- ③ ITEM 252 - FULL DEPTH PAVEMENT SAWING
- ④ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22 (10.50")
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- ⑪ ITEM SPECIAL - PAVEMENT OVERLAY COMPOSITE (30" WIDE, CENTERED OVER JOINT)
- ⑫ NOT USED
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- ⑭ ITEM 618 - RUMBLE STRIP (ASPHALT CONCRETE)
- ⑮ ITEM 659 - SEEDING AND MULCHING
- ⑯ ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (3.5")
- ⑰ ITEM 605 - 4" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (24" DEEP)
- ⑱ ITEM 605 - 4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (12" & 18" DEEP)

EXISTING LEGEND

- (A) EXISTING ±5" ASPHALT CONCRETE
(B) EXISTING 9" REINFORCED CONCRETE BASE



UTILITIES

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

CABLE ARMSTRONG UTILITIES 1215 CLAREMONT AVENUE ASHLAND, OH 44805 419.289.0161	CABLE CHARTER COMMUNICATIONS 5520 WHIPPLE AVENUE NW NORTH CANTON, OH 44720 330.494.9200
COMMUNICATION AT&T TRANSMISSION 5980 WILCOX PLACE DUBLIN, OH 43016 614.760.8320	COMMUNICATION FRONTIER COM 1534 SR 511 SOUTH ASHLAND, OH 44805 419.282.6551
ELECTRIC OHIO EDISON 1717 ASHLAND ROAD MANSFIELD, OH 44905 419.521.6214	ELECTRIC OHIO EDISON TRANSMISSION 76 SOUTH MAIN ST AKRON, OH 44308 330.384.5489

THE AFOREMENTIONED UTILITY COMPANIES AND AGENCIES HAVE VARIOUS FACILITIES IN THE AREA THAT WILL REMAIN IN PLACE DURING CONSTRUCTION.

EXTREME CAUTION SHOULD BE EXERCISED IN AREAS WITH UTILITIES. SECTIONS 105.07 AND 107.16 OF THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS REQUIRE, AMONG OTHER THINGS, THAT THE CONTRACTOR COOPERATE WITH ALL UTILITIES LOCATED WITHIN THE LIMITS OF THIS CONSTRUCTION PROJECT AND TAKE RESPONSIBILITY FOR THE PROTECTION OF THE UTILITY PROPERTY AND SERVICES.

ROUNDING

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

EXISTING PLANS

EXISTING PLANS ENTITLED ASD-30-8.52, DATED 1964 MAY BE INSPECTED IN THE ODOT DISTRICT THREE OFFICE IN ASHLAND.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE 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 STANDARD VRS AVERAGE
MONUMENT TYPE: TYPE B

VERTICAL POSITIONING
ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: GEOID12B

HORIZONTAL POSITIONING
REFERENCE FRAME: NAD83 (2011)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE – NORTH ZONE (3401) SCALED BY A COMBINED GRID SCALE AND ELEVATION PROJECT ADJUSTMENT FACTOR ABOUT THE GRID ORIGIN N=0, E=0 COORDINATE
COMBINED SCALE FACTOR: UNITLESS GRID TO PROJECT ADJUSTMENT FACTOR (PAF)
MULTIPLIER = 1.000089430
ORIGIN OF COORDINATE SYSTEM: (0,0)

PROJECT COORDINATE UNITS ARE IN U.S. SURVEY FEET, GRID COORDINATE UNITS ARE IN METERS. USE THE FOLLOWING CONVERSION FACTOR:
1 METER = 39.37 INCHES = 3.280833333 U.S. SURVEY FEET

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.

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.

ROUTINE MAINTENANCE

BETWEEN THE TIME THAT BIDS ARE TAKEN AND THE START OF CONSTRUCTION, THE MAINTAINING AGENCY MAY ENTER UPON THE PROJECT AND PERFORM ROUTINE MAINTENANCE SUCH AS CRACK SEALING, PATCHING, AND BERM AND SHOULDER REPAIR. THE EFFECTS, IF ANY, OF THE PERFORMANCE OF ROUTINE MAINTENANCE SHALL BE CONSIDERED AS INHERENT IN WORK OF THE CHARACTER PROVIDED FOR IN THE PLAN AND THE RESULTING CONDITIONS SHALL NOT BE CONSIDERED AS DIFFERING MATERIALLY FROM THOSE EXISTING AT THE TIME BIDS WERE TAKEN.

PROFILE AND ALIGNMENT

PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. (PREVIOUS CONSTRUCTION PLANS SHOWING THE ORIGINAL ALIGNMENT AND PROFILE, ARE AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 3 OFFICE). PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

ITEM 201 – CLEARING AND GRUBBING

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

SIZES	NO. TREES	NO. STUMPS	TOTAL
6"	4	0	4
8"	2	0	2

ITEM 201 – TREE REMOVAL RESTRICTIONS

THIS PROJECT IS WITHIN THE KNOWN SUMMER BREEDING RANGE OF THE FEDERAL ENDANGERED INDIANA BROWN BAT AND MAY IMPACT THAT SPECIES HABITAT. THE SUMMER ROOSTING AND BROOD REARING HABITAT OF THIS SPECIES IS IN LIVING OR STANDING DEAD TREES OR SNAGS WITH EXFOLIATING, PEELING, OR LOOSE BARK, SPLIT TRUNKS AND/OR BRANCHES, OR CAVITIES. ANY UNAVOIDABLE CUTTING OF SUCH TREES SHALL BE PERFORMED ONLY BEFORE APRIL 1ST OR AFTER SEPTEMBER 30TH WHEN THIS SPECIES WOULD NOT BE USING SUCH HABITAT.

PART-WIDTH CONSTRUCTION

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

ITEM 408 – PRIME COAT, AS PER PLAN

THE CONTRACTOR SHALL APPLY ONE COAT OF MC-70 (AS PER SECTION 702) AT A RATE OF 0.40 GAL/SY TO THE COMPLETED AGGREGATE SHOULDER (ITEM 617) AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE A SHIELD TO PREVENT THE SPRAYING OR DRIFTING OF LIQUID BITUMINOUS MATERIAL ONTO THE EDGE OF PAVEMENT OR EDGE LINE. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO 107.10 OF THE SPECIFICATIONS.

ITEM SPECIAL - PAVEMENT OVERLAY FABRIC COMPOSITE

DESCRIPTION. THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING PAVEMENT OVERLAY FABRIC COMPOSITE AS SHOWN ON THE PLANS AND AT LOCATIONS DESIGNATED BY THE ENGINEER.

MATERIALS. PAVEMENT OVERLAY FABRIC COMPOSITE SHALL BE GLASGRID CG200 COMPOSITE ASPHALT REINFORCEMENT SOLUTION, TENCATE MIRAFI MPG100 (PGM-G100/100), OR APPROVED EQUAL. COMPOSITE SHALL BE CONSTRUCTED OF LONG CHAIN SYNTHETIC POLYMERS COMPOSED OF AT LEAST 85 PERCENT OF POLYOLEPHINES, POLYESTERS, AND POLYAMIDES BY WEIGHT, SHALL BE RESISTANT TO CHEMICAL ATTACK, MILDEW, ROT, AND ATTACHED TO A FIBERGLASS GRID.

THE COMPOSITE FABRIC SHALL NOT BE EXPOSED TO ULTRAVIOLET RADIATION FOR MORE THAN 7 DAYS. THE FABRIC WIDTH SHALL BE INDICATED ON THE TYPICAL CROSS SECTION AND FURNISHED IN ROLLS.

THE ASPHALT SEALANT SHALL BE PG64-22 MEETING THE REQUIREMENTS OF 702.01.

CERTIFICATION SHALL BE FURNISHED IN ACCORDANCE WITH 101.061 BEFORE THE FABRIC IS PLACED. THE ENGINEER MAY REQUIRE SAMPLING FOR TESTING PURPOSES AS DIRECTED BY THE LABORATORY.

EQUIPMENT. THE CONTRACTOR SHALL PROVIDE EQUIPMENT FOR HEATING AND APPLYING BITUMINOUS MATERIAL. HEATING EQUIPMENT AND DISTRIBUTORS SHALL MEET THE REQUIREMENTS OF 407.

THE MECHANICAL LAYDOWN EQUIPMENT SHALL BE MOUNTED ON A FOUR-WHEELED VEHICLE THAT IS CAPABLE OF DRIVING OVER THE FABRIC WHILE IT IS BEING INSTALLED TO CONTROL THE TENSION ON THE MATERIAL. THE LAYDOWN MACHINE SHALL BE EQUIPPED WITH CLUTCHES TO ADJUST THE ROLL TENSION AND BROOMS TO SMOOTH OUT WRINKLES DURING INSTALLATION. MANUAL LAYDOWN MAY ONLY BE USED IN AREAS INACCESSIBLE TO THE LAYDOWN MACHINE.

CONSTRUCTION DETAILS

1.SURFACE PREPARATION. THE CRACKS AND ENTIRE ROAD SURFACE TO BE TREATED, AND AT LEAST ONE ADDITION FOOT ON EACH SIDE, SHALL BE CLEANED BY SWEEPING, BLOWING, OR OTHER METHODS UNTIL ALL DUST, MUD, CLAY LUMPS, VEGETATION, AND FOREIGN MATERIAL ARE REMOVED ENTIRELY FROM THE PAVEMENT BEFORE THE BITUMINOUS MATERIAL IS APPLIED. CARE SHALL BE EXERCISED TO PREVENT MATERIAL SO REMOVED FROM BECOMING MIXED WITH THE NEW SURFACE. LARGE CRACKS AND POTHOLES SHOULD BE FILLED.

2.APPLICATION OF ASPHALT SEALANT. THE APPLICATION OF THE ASPHALT SEALANT SHALL CONFORM TO THE APPLICABLE PORTIONS OF 407. THE ASPHALT SEALANT SHALL BE UNIFORMLY SPRAYED OVER THE AREA TO BE COVERED BY FABRIC AT A RATE OF 0.25 TO 0.30 GALLON PER SQUARE YARD.

THE QUANTITY APPLIED WILL VARY WITH THE SURFACE CONDITION OF THE EXISTING PAVEMENT (DEGREE OF POROSITY, FOR EXAMPLE). THE FABRIC ALONE, UNDER HEAT OF THE OVERLAY, WILL ABSORB AT LEAST 0.20 GALLON PER SQUARE YARD. WITHIN INTERSECTIONS OR OTHER ZONES WHERE VEHICLE BRAKING IS COMMON PLACE, THE APPLICATION SHALL BE REDUCED 20 PERCENT. THE SEALANT SHALL BE APPLIED TO AN AREA TWO TO SIX INCHES WIDER THAN THE WIDTHS OF THE FABRIC BEING PLACED, BUT RESTRICTED TO THE AREA OF IMMEDIATE FABRIC LAYDOWN. APPLICATION SHALL BE BY DISTRIBUTOR WITH HAND SPRAYING ALLOWED ONLY WHERE THE DISTRIBUTOR CANNOT BE USED. ASPHALT SPILLS SHALL BE CLEANED FROM THE ROAD SURFACE TO AVOID FLUSHING AND POSSIBLE MOVEMENT AT THESE ASPHALT RICH AREAS.

THE ASPHALT CEMENT USED AS A SEALANT SHALL HAVE DISTRIBUTOR TANK TEMPERATURE BETWEEN 300 DEGREES AND 350 DEGREES F. APPLICATION TEMPERATURE IS NOT CRITICAL AFTER THE ASPHALT IS SPRAYED ON THE PAVEMENT. IF THE FABRIC IS TO BE OVER-SPRAYED, DISTRIBUTOR TANK TEMPERATURES SHOULD NOT EXCEED 350 DEGREES F TO AVOID DAMAGE TO THE FABRIC.

3.COMPOSITE FABRIC PLACEMENT. THE COMPOSITE FABRIC SHALL BE PLACED ON THE ASPHALT SEALANT AS SOON AS PRACTICAL AND BEFORE THE TACKINESS OF THE SEALANT IS LOST. THE COMPOSITE SHALL BE PLACED AS SMOOTHLY AS POSSIBLE TO AVOID WRINKLES. IT SHALL BE UNROLLED SO THAT THE SOFT SIDE IS UNWOUND INTO THE SEALANT AND THE GRID SIDE UP, THUS PROVIDING OPTIMUM BOND BETWEEN FABRIC AND PAVEMENT DURING THE CONSTRUCTION PROCESS. WRINKLES SEVERE ENOUGH TO CAUSE FOLDS SHALL BE SLIT AND LAID FLAT. SMALL WRINKLES, WHICH FLATTEN UNDER COMPACTION ARE NOT DETRIMENTAL TO PERFORMANCE. THE COMPOSITE SHALL BE BROOMED OR SQUEEGEED TO REMOVE AIR BUBBLES AND MAKE COMPLETE CONTACT WITH THE ROAD SURFACE AS RECOMMENDED BY THE FABRIC MANUFACTURER. THE FABRIC SHALL BE LAID STRAIGHT, WITHIN THE SEALANT AREA. MODERATE CURVES CAN BE NEGOTIATED BY STRETCHING THE FABRIC ON THE OUTSIDE OF THE CURVE BY ADJUSTING THE DRAG ON THE BRAKES OF THE LAYDOWN EQUIPMENT. TRANSVERSE JOINTS SHALL BE SHINGLED IN THE DIRECTION OF PAVING.

LONGITUDINAL JOINTS SHALL BE MADE BY OVERLAPPING THE FABRIC ONE TO TWO INCHES. TRANSVERSE JOINTS SHALL BE MADE BY OVERLAPPING THE FABRIC MINIMUM OF FOUR INCHES. ADDITIONAL SEALANT (ABOUT 0.20 GAL. PER SQ. YD.) SHALL BE ADDED TO THE JOINTS AS REQUIRED. THE ADDITIONAL SEALANT FOR TRANSVERSE JOINTS MAY BE APPLIED

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

CAD 01/15/21

PROJECT ID

110853

SHEET

P.5

TOTAL

44

ITEM SPECIAL - PAVEMENT OVERLAY FABRIC COMPOSITE (CONT.)

BY HAND SPRAYING OR WITH MOP AND BUCKET IF EXTREME CARE IS TAKEN TO NOT EXCEED THE SPECIFIED RATE.

TO ENHANCE THE BOND OF THE FABRIC WITH THE EXISTING PAVEMENT AND TO SMOOTH OUT ANY WRINKLES FOR FOLDS IN THE FABRIC, THE CONTRACTOR MAY BE REQUIRED TO PNEUMATICALLY ROLL THE FABRIC AFTER IT IS PLACED.

4.TREATMENT OF THE APPLIED COMPOSITE PRIOR TO THE ASPHALT CONCRETE. IT IS UNNECESSARY TO TACK COAT THE FABRIC PRIOR TO PLACEMENT OF THE OVERLAY UNLESS THERE ARE CIRCUMSTANCES SUCH AS DELAY OF OVERLAY, DUST ACCUMULATION OR UNDER APPLICATION OF SEALANT WHICH WOULD MAKE TACK COATING DESIRABLE. IF A TACK COAT IS REQUIRED, EMULSIFIED ASPHALT SHALL BE APPLIED AT A RATE OF 0.02 TO 0.05 GALLON PER SQUARE YARD RESIDUAL ASPHALT. PLACEMENT OF THE ASPHALT CONCRETE OVERLAY SHALL CLOSELY FOLLOW FABRIC LAYDOWN. IN THE EVENT THAT THE SEALANT BLEEDS THROUGH THE FABRIC BEFORE THE ASPHALT CONCRETE IS PLACED, IT MAY BE NECESSARY TO BLOT THE SEALANT BY SPREADING SAND OR ASPHALT CONCRETE OVER THE AFFECTED AREAS. THIS WILL PREVENT ANY TENDENCY FOR CONSTRUCTION EQUIPMENT TO PICK UP THE FABRIC WHEN DRIVING OVER IT.

TURNING OF THE PAVER AND OTHER VEHICLES SHALL BE GRADUAL TO AVOID MOVEMENT OR DAMAGE TO THE COMPOSITE. UNESSENTIAL TRAFFIC ON COMPOSITE SHOULD BE ELIMINATED. IF IT IS NECESSARY TO OPEN THE ROAD TO TRAFFIC AFTER FABRIC PLACEMENT, BUT PRIOR TO PAVING, IT IS ADVISABLE TO SPREAD A SMALL AMOUNT OF SAND OVER THE MEMBRANE TO PREVENT TIRES FROM STICKING TO THE SEALANT OR PULLING UP THE COMPOSITE. THIS PRACTICE IS TO BE AVOIDED IF POSSIBLE TO PREVENT DAMAGE TO THE MEMBRANE. QUICK STOPS AND SHARP TURNS MAY DAMAGE THE MATERIAL.IF RAIN PRIOR TO THE OVERLAY SHOULD CAUSE A BLISTERED APPEARANCE AND SOME BOND LOSS THROUGHOUT THE MEMBRANE, IT SHOULD BE CORRECTED BY PNEUMATIC ROLLING UNTIL ADHESION IS RESTORED.

5.ASPHALT CONCRETE. THE ASPHALT CONCRETE OVERLAY SHALL CONFORM TO 401 SPECIFICATION WITH A MINIMUM THICKNESS OF 1.5.

METHOD OF MEASUREMENT. THE ACCEPTED FABRIC COMPOSITE PLACED IN ACCORDANCE WITH THESE SPECIFICATIONS AND AS DIRECTED WILL BE MEASURED BY THE SQUARE YARD OF ROADWAY, RAMPS, AND TURNOUTS COVERED BY THE COMPOSITE FABRIC. LAPS IN COMPOSITE FABRIC WILL NOT BE MEASURED.

BLOTTING THE SEALANT, SPREADING SAND OR ASPHALT CONCRETE OVER THE MEMBRANE TO PREVENT TIRES FROM STICKING TO THE SEALANT OR PULLING UP THE FABRIC, ROLLING TO RESTORE BOND, OR APPLICATION OF A TACK COAT WILL NOT BE MEASURED FOR DIRECT PAYMENT BUT SHALL BE CONSIDERED A NECESSARY PART OF THE CONSTRUCTION INVOLVED AND THE COST THEREFORE SHALL BE INCLUDED IN OTHER APPROPRIATE CONTRACT UNIT PRICES.

BASIS OF PAYMENT. THE ACCEPTED QUANTITIES OF PAVEMENT OVERLAY FABRIC COMPOSITE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL LABOR, MATERIALS (INCLUDING ASPHALT SEALANT AND OVERLAP), TOOLS, EQUIPMENT AND INCIDENTALS FOR DOING ALL THE WORK INVOLVED IN FURNISHING AND PLACING THE COMPOSITE COMPLETE IN PLACE AS SHOWN ON THE PLANS OR AS DIRECTED.

ITEM 611 – 4” CONDUIT, TYPE E

REFERENCE TRAFFIC SCD HL-30.11 FOR DETAILS ABOUT DRAINING PULLBOXES. UNDERDRAINS FOR PULLBOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED 20 FEET. THE FOLLOWING ESTIMATED QUANTITY IS CARRIED TO THE GENERAL SUMMARY FOR THIS PURPOSE:

ITEM 611, 4" CONDUIT, TYPE E 120 FT

POST CONSTRUCTION STORM WATER TREATMENT

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

VEGETATED BIOFILTER (W105)

THIS PLAN UTILIZES VEGETATED BIOFILTER(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AND ITEM 670, SLOPE EROSION PROTECTION 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 SPECIFIED IN THE PLANS.

EXISTING CULVERT VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PROPOSED PLANS PERTAINING TO THE EXISTING CULVERT HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING CULVERT AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, SUCH DETAILS AND DIMENSIONS ARE INDICATIVE OF THE EXISTING CULVERT AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05 AND 105.02. BASE THE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING CULVERT. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ITEM 611 – RESIDENTIAL AND COMMERCIAL DRAINAGE CONNECTIONS

EXISTING ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEW CONDUIT REQUIRED TO REPLACE OR EXTEND THE EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER.

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

PAYMENT FOR ALL LABOR AND MATERIALS WILL BE PERFORMED BY CHANGE ORDER.

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.
CONNECTION OF REPLACEMENT CONDUIT INTO CATCH BASINS

THE CONNECTION OF REPLACEMENT CONDUIT SECTIONS INTO CATCH BASINS AS DETAILED ON THE DRAINAGE DETAILS SHALL BE DONE AS FOLLOWS: CREATE HOLE FOR CONDUIT IN CATCH BASIN WALL BY METHOD APPROPRIATE FOR DETAILS SHOWN ON DRAINAGE DETAILS. (IF CATCH BASIN IS FORMED, CONDUIT OPENING SHALL BE INCLUDED IN FORMING PROCESS: IF CATCH BASIN IS PRE-CAST, OPENING FOR CONDUIT SHALL BE ACCOMMODATED IN THE MANUFACTURE OF PRE-CAST CATCH BASINS. SUBSEQUENTLY, CONCRETE MASONRY SHALL BE USED TO GROUT AROUND THE PIPE WHERE IT INSERTS THROUGH THE HOLE IN THE CATCH BASIN WALL).

ITEM 611 – FARM DRAINS

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

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

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

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

PAYMENT FOR ALL LABOR AND MATERIALS WILL BE PERFORMED BY CHANGE ORDER.

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.

ITEM 625 – POWER SERVICE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING SHALL APPLY.

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

OHIO EDISON TRANSMISSION
76 SOUTH MAIN ST
AKRON, OH 44308
330.384.5489

POWER SERVICE: 120/240 VOLT, 3 WIRE, SINGLE PHASE WITH GROUND.

ALL POWER SERVICES SHALL BE METERED. THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN FIVE FEET HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND. AS PER SCD HL-40.20 NOTE 5, PROVIDE A SWITCHED, LOCKABLE METER DISCONNECT AS PERMITTED. THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES AND DISCONNECTS.

THE CONTRACTOR SHALL PAY ALL ELECTRICAL ENERGY CHARGES FOR NEW POWER SERVICES ESTABLISHED BY THIS PROJECT. UPON COMPLETION OF THIS PROJECT AND AFTER WRITTEN AUTHORIZATION FROM THE DISTRICT CONSTRUCTION ENGINEER, POWER SERVICE ELECTRICAL ENERGY ACCOUNTS SHALL BE TRANSFERRED TO THE MAINTAINING AGENCY. THIS SHALL INCLUDE NEW POWER SERVICE ESTABLISHED BY THIS PROJECT AS WELL AS REASSIGNMENT OF EXISTING POWER SERVICE DUE TO WORK PERFORMED BY THIS PROJECT. IF POWER SERVICE IS TRANSFERRED PRIOR TO RECEIVING THE WRITTEN AUTHORIZATION, A DISINCENTIVE OF \$100 PER DAY SHALL BE ASSESSED FOR EACH CALENDAR DAY OF NON-COMPLIANCE.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH CMS ITEM 625, "POWER SERVICE, AS PER PLAN" WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 – ARC FLASH CALCULATIONS AND LABEL, POWER SERVICE

THE SPECIFICATIONS AND REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 825 SHALL APPLY TO THE POWER SERVICE FOR THE HIGHWAY LIGHTING.

PADLOCKS AND KEYS

PADLOCKS FURNISHED FOR ODOT CONTROL CENTERS SHALL BE EITHER BRASS OR BRONZE, EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNAN 660A, AND SHALL BE KEYED IN ACCORDANCE WITH CMS 631.06.

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

CAD 01/15/21

PROJECT ID

110853

SHEET

P.6

TOTAL

44

GROUNDING AND BONDING

- THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND THE TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:
- ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.
 - PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
 - WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.
 - METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.
 - IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.
 - 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.
 - 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.
 - CONDUITS.
 - 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.
 - THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
 - BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
 - 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.
 - WIRE FOR GROUNDING AND BONDING.
 - 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:
 - USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.
 - USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.1 ABOVE.
 - 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.1 ABOVE.
 - 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.
 - 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.
 - GROUND ROD.
 - A 3/4 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.

- THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.
- GROUNDING AND BONDING (CONT.)**
- 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
 - POWER SERVICE AND DISCONNECT SWITCH.
 - 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.
 - THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.
 - 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.
 - 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.
 - PAYMENT – ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

ITEM 630 - GROUND MOUNTED SUPPORT, NO. 3, AS PER PLAN

GROUND MOUNTED POST SUPPORTS USED ON THIS PROJECT SHALL BE U-CHANNEL DESIGN AND BE PER CMS 630.06 AND SCD TC-41.20 WITH THE FOLLOWING EXCEPTIONS.

POST SUPPORTS EXPOSED TO TRAFFIC SHALL BE STUBBED AND SPLICED PER THE FOLLOWING PROCEDURE:

- DRIVE 60" LONG STUB TO WITHIN 12" OF GROUND SURFACE.
- BOLT UPPER SIGN POST TO STUB USING QUANTITY OF FOUR 5/16" ALUMINUM BOLTS, STAINLESS STEEL LOCK WASHERS, SS WASHERS, AND SS NUTS WITH A MINIMUM OF 4" CENTER TO CENTER SPACING.
- THE UPPER POST SHALL BE SPLICED BEHIND THE STUB POST TO MINIMIZE THE POSSIBILITY OF VEHICLE SNAGGING DURING A COLLISION.
- CARE SHALL BE EXERCISED TO DRIVE AND ERECT POSTS VERTICALLY PLUMB AND ERECT SIGNS SO THEY ARE LEVEL WHEN VIEWED FROM THE ROADWAY.
- PLACE NO MORE THAN TWO POSTS WITHIN 7' VEHICLE PATH UNLESS LOCATED BEHIND GUARDRAIL. SEE SCD-TC 41.20.
- COST OF SPLICE CONNECTION AND OVERLAP OF POSTS SHALL BE INCIDENTAL TO THE COST OF EACH SIGN SUPPORT.

BASIS OF PAYMENT SHALL BE AT THE UNIT PRICE BID PER FOOT.

ALL GROUND MOUNTED POST SUPPORTS SHALL BE DRIVEN VERTICALLY PLUMB TO A MINIMUM EMBEDMENT DEPTH OF 48 INCHES. IF GROUND CONDITIONS PREVENT DRIVING TO THIS DEPTH, THE SIGN INSTALLATION SHALL BE INSTALLED USING TWO POSTS SIDE BY SIDE TO FORM A DUAL POST INSTALLATION.

WHERE NEW SIGNS ARE TO BE INSTALLED ON EXISTING BEAM SUPPORTS, THE EXISTING SIGN SHALL BE REMOVED WITHOUT DISTURBING THE BEAM SUPPORTS AND THE NEW SIGN INSTALLED IN ITS PLACE ABOVE THE HINGE POINTS. IF THE NEW SIGN IS WIDER, OFFSET IT TO THE RIGHT AS NECESSARY TO MAINTAIN SIDE CLEARANCE, WITH APPROVAL OF THE ENGINEER. IF THE NEW SIGN EXTENDS ABOVE THE EXISTING BEAM SUPPORTS BY MORE THAN SIX INCHES, SIGN BACKING ASSEMBLIES EXTENDING FROM THE TOP OF THE NEW SIGN TO AT LEAST THREE FEET BELOW THE TOP OF THE BEAMS SHALL BE USED AT INTERVALS OF NO MORE THAN ONE AND ONE-HALF FEET FROM THE ENDS AND THREE FEET APART LATERALLY TO SUPPORT THE ADDITIONAL SIGN HEIGHT.

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.
- 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 SECTION 204.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS).

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 C&MS 204.03.
- 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 C&MS 204.06.
- EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO C&MS 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS. PLACE ITEM 204 - GEOTEXTILE FABRIC ON TOP OF THE COMPACTED EXISTING SOIL UNDER THE PROPOSED GRANULAR FILL OVER THE ENTIRE UNDERCUT AREA.
- PROOF ROLL THE STABILIZED AREAS ACCORDING TO C&MS 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 QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY FOR THE COMPLETION OF THE ABOVE WORK. PAYMENT WILL BE MADE AT THE APPROPRIATE BID PRICE FOR THE ABOVE ITEMS AND WILL INCLUDE ALL MATERIAL, EQUIPMENT, LABOR, AND INCIDNETALS NEEDED TO COMPLETE THIS WORK. FOR ESTIMATING PURPOSES ONLY, AN AREA EQUAL TO 60% OF THE FINISHED PROPOSED PAVEMENT SURFACE WAS USED, WITH AN ASSUMED DEPTH OF CUT OF 12 INCHES. DUE TO A LACK OF GEOTECHNICAL INVESTIGATION, THIS AREA IS NOT DETAILED IN THESE PLANS. THESE ITEMS ARE TO BE USED AS DIRECTED BY THE ENGINEER BASED ON THE RESULTS OF SUBGRADE COMPACTION AND PROOF ROLLING OVER THE ENTIRE PROJECT AREA.

US 30 AND SR 89 INTERSECTION
ITEM 204 - EXCAVATION OF SUBGRADE 1815 CU YD
ITEM 204 - GRANULAR MATERIAL, TYPE B 1815 CU YD
ITEM 204 - GEOTEXTILE FABRIC 5445 SQ YD

THE FOLLOWING QUANTITY IS PROVIDED IN THE ROADWAY SUBSUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING OVER THE ENTIRE PROJECT AREA.

US 30 AND SR 89 INTERSECTION
ITEM 204 - PROOF ROLLING 5 HOURS

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY FOR PROOF ROLLING IN THE PROPOSED GRANULAR FILL AREA WHERE UNSUITABLE SUBGRADE WAS REMOVED AND REPLACED AS PER THIS NOTE AS ABOVE:

US 30 AND SR 89 INTERSECTION
ITEM 204 - PROOF ROLLING 3 HOURS

ITEM 625 – LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), IES-III, LED, 3000K, 8500-12900 LUMENS, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT’S CONSTRUCTION AND MATERIAL SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATION 813 & 913, LUMINAIRES FOR CONVENTIONAL LIGHTING UNITS SHALL BE AS FOLLOWS:

LUMINAIRES SHALL BE AMERICAN ELECTRIC AUTOBAHN SERIES (ATBM-PXX-MVOLT-R3-3K-NL-XXX), COPPER LUMARK NAVION SERIES (NAV-AF-C3-D-UNV-T3-XX-7030-1200-AP-XX), GE EVOLVE SERIES (ERL2-0-X-C3-30-X-GRAY-XXX) OR EQUAL APPROVED BY THE ENGINEER.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS ITEM 625, "LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), IES-III, LED, 3000K, 8500-12900 LUMENS" FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

CAD 01/15/21

PROJECT ID

110853

SHEET

TOTAL

P.7

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ITEM 614 – MAINTAINING TRAFFIC (GENERAL)

MAINTAIN ONE 12’ LANE OF TRAFFIC AT ALL TIMES.

SUBMIT, IN WRITING, A SCHEDULE OF OPERATIONS TO THE ENGINEER AND RECEIVE APPROVAL BEFORE WORK IS STARTED ON THE PROJECT. PRIOR TO BEGINNING WORK, COORDINATE THE MAINTENANCE OF TRAFFIC OPERATIONS WITH THE LOCAL STATE HIGHWAY PATROL.

ITEM 614 – MAINTAINING TRAFFIC (CLOSING PARAGRAPH FOR NOTE)

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 CURRENT EDITION WITH THE LATEST REVISIONS. 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.

BUTT JOINTS

DO NOT CUT BUTT JOINTS AND ALLOW THEM TO BE LEFT OPEN TO TRAFFIC. FILL THE BUTT JOINTS WITH A TEMPORARY ASPHALT CONCRETE WEDGE USING ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC IN ACCORDANCE WITH THE TAPER RATES SET FORTH IN SCD BP-3.1.

ERECT AND MAINTAIN CONSTRUCTION “BUMP” (W8-1-36) AND “ADVISORY SPEED” (W13-1-24) SIGNS DURING THE PERIOD THE BUTT JOINT IS LEFT OPEN. PAYMENT FOR THESE SIGNS WILL BE MADE UNDER THE LUMP SUM BID PRICE FOR ITEM 614 MAINTAINING TRAFFIC.

CONTRACTOR EQUIPMENT ACCESS AND WORK OPERATIONS

IN ADDITION TO THE REQUIREMENTS OF SECTION 614 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS THE FOLLOWING SHALL APPLY:

THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAVEL WHERE PRACTICAL. A FLAGGER SHALL BE USED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM.

THE CONTRACTOR SHALL ARRANGE CONSTRUCTION OPERATIONS SO AS TO PREVENT ANY INTERFERENCE TO THE CONTINUOUS FLOW OF TRAFFIC. ALL VEHICLES, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIMES TO THE CLOSED LANES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

ITEM 614 – MAINTAINING TRAFFIC (AT ALL TIMES)

A MINIMUM OF ONE LANE(S) OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT OR THE COMPLETED PAVEMENT.

LANE CLOSURE DISINCENTIVE

A LANE CLOSURE IS DEFINED AS ANY RESTRICTION OF A LANE OF TRAFFIC INCLUDING, BUT NOT LIMITED TO, SET UP AND TEAR DOWN OF TRAFFIC CONTROL ZONES. THE CONTRACTOR WILL BE ASSESSED A DISINCENTIVE FEE IN THE AMOUNT OF \$85 PER MINUTE THAT LANES ARE CLOSED TOR TRAFFIC DURING TIMES DESIGNATED AS “LANE CLOSURE NOT PERMITTED” AS STATED IN THESE PLANS AND ON THE ODOT PLCM WEB SITE AT <http://plcm.dot.state.oh.us>.

ITEM 614 – MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR)

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 90 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 9. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$10,000 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

ITEM 614 – MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

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

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

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

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

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$85 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

ITEM 614 – MAINTAINING TRAFFIC (LANE CLOSURE/REDUCTION REQUIRED)

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN FIVE (5) CALENDAR DAYS, 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.

ITEM 614 – MAINTAINING TRAFFIC (NOTICE OF CLOSURE SIGN)

NOTICE OF CLOSURE SIGNS (W20-H14) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. [AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLAT SHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.] THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

NOTICE OF CLOSURE SIGN TIME TABLE		
ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP AND ROAD CLOSURES	≥ 2 WEEKS	14 CALENDAR DAYS*
	> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS*
	< 12 HOURS	2 BUSINESS DAYS*

* DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H14 SIGN LISTS THE NAME OF THE DEPARTMENT, i.e. “THE OHIO DEPT. OF TRANS.”

ITEM 614 – MAINTAINING TRAFFIC (ESTIMATED QUANTITIES)

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR MAINTENANCE OF TRAFFIC. INCLUDE THE COST FOR THE REMOVAL OF ALL MAINTENANCE OF TRAFFIC MATERIALS IN THE CONTRACT BID PRICE FOR EACH ITEM BELOW. REMOVE THE MATERIALS AT THE DIRECTION OF THE ENGINEER WHEN NO LONGER OPERATIONALLY NEEDED.

ITEM 614 – ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

10 CU YD

ITEM 614 – MAINTAINING TRAFFIC (ROAD CLOSED SIGN)

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

ITEM 614 – MAINTAINING TRAFFIC (SIGNS AND BARRICADES)

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

TRENCH 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 SUBBASE 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 3.5 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 BACKFILLED 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

40 M. GAL.

ITEM 614 – BUSINESS ENTRANCE (M4-H15) SIGN, AS PER PLAN

THE BUSINESS ENTRANCE (M4-H15) SIGN SHOULD BE PROVIDED AT EACH TEMPORARILY RELOCATED COMMERCIAL DRIVEWAY FOR WHICH THE RELOCATION IS NOT OBVIOUS TO THE MOTORIST. THE PROJECT ENGINEER SHALL DETERMINE WHETHER OR NOT THE DRIVEWAY RELOCATION IS, OR IS NOT, OBVIOUS AND WHETHER OR NOT A SIGN SHOULD BE PROVIDED. ONLY ONE SIGN PER BUSINESS SHALL BE PERMITTED. THE SIGN SHALL BE 36 INCH X 48 INCH IN SIZE WITH TYPE G OR TYPE H ORANGE RETROREFLECTIVE SHEETING. THE SIGN LEGEND SHALL BE PLACED ON BOTH SIDES OF THE SIGN (BACK TO BACK). THE SIGN SHALL HAVE THE STANDARD M4-H15 LEGEND WITH THE WORD “BUSINESS” ON THE TOP LINE, EXCEPT UNDER UNUSUAL CIRCUMSTANCES WHERE IT MAY NOT BE INTUITIVE THAT A DRIVEWAY SERVES A SPECIFIC BUSINESS. IN SUCH UNUSUAL CASES, THE ACTUAL BUSINESS NAME MAY BE SUBSTITUTED FOR THE WORD “BUSINESS”.

THE SIGN SHALL BE MOUNTED ON TWO #3 POSTS OR ON TEMPORARY POSTS IN ACCORDANCE WITH SCD MT105.10 AND IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. THE SIGN SHALL BE CLEARLY VISIBLE AND SHALL CLEARLY IDENTIFY THE LOCATION OF THE DRIVEWAY. THE SIGN SHOULD BE POSITIONED AT 900 TO THE DIRECTION(S) OF TRAFFIC. THE SIGN MAY NEED TO BE MOVED FOR EACH PHASE OF THE MAINTENANCE OF TRAFFIC OPERATIONS.

PAYMENT FOR ALL COSTS ASSOCIATED WITH MANUFACTURING, MOUNTING, RELOCATING, AND REMOVING THE SIGN, INCLUDING ALL LABOR, MATERIALS AND EQUIPMENT SHALL BE INCLUDED IN THE CONTRACT PRICE PER EACH FOR ITEM 614-BUSINESS ENTRANCE SIGN.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS ITEM:

ITEM 614, BUSINESS ENTRANCE SIGN

4 EACH

MAINTENANCE OF LOCAL DETOUR ROUTE

A LOCAL DETOUR ROUTE, OTHER THAN THE OFFICIAL SIGNED ODOT DETOUR ROUTE, AS NOTED IN THESE PLANS, WILL BE SELECTED BY AGREEMENT BETWEEN ODOT AND LOCAL GOVERNMENTAL AGENCIES PRIOR TO THE HIGHWAY CLOSURE. DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THIS ROUTE IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST, AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DESIGNATED LOCAL DETOUR ROUTE SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO ITS USE FOR THIS PURPOSE. ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DIRECTED BY THE ENGINEER. THE DESIGNATED LOCAL DETOUR ROUTE IS TO BE REVIEWED AND REPAIRED PRIOR TO THE ASPHALT CONTRACTOR OR SUBCONTRACTOR LEAVING THE PROJECT.

PAYMENT FOR THE WORK NECESSARY TO REPAIR THESE LOCAL ROADS WILL BE PERFORMED BY CHANGE ORDER.

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

CAD 01/15/21

PROJECT ID

110853

SHEET

TOTAL

P.8

44

WORK ZONE SPEED ZONES (WZSZs)

THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISION(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:

WZSZ REVISION NUMBER(S)	COUNTY-ROUTE-SECTION(S)	DIRECTION(S)
WZ-20646	ASD-30-9.85/10.71	EB & WB

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRE-CONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, Crossover, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.

ALL WZSZS FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ.

WZSZS USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THIS NOTE, APPROVED LIST, SUPPLEMENTAL SPECIFICATIONS (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRECONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.

TABLE 1: WARRANTED WORK ZONE SPEED LIMITS (MPH) FOR WORK ZONES ON HIGH-SPEED (55 MPH OR GREATER) MULTI-LANE HIGHWAYS:

ORIGINAL POSTED SPEED LIMIT	WITH POSITIVE PROTECTION		WITHOUT POSITIVE PROTECTION	
	WORKERS PRESENT	WORKERS NOT PRESENT	WORKERS PRESENT	WORKERS NOT PRESENT
70	60	65	55	65
65	55	60	50	60
60	55	60	50	60
55	50	55	45	55

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

[ITEM 808, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY 20 SIGN MNTH]
[ASSUMING 4 DSL SIGN ASSEMBLIES FOR 5 MONTH(S)]

WORK ZONE INCREASED PENALTIES SIGN (R11-H5a)

R11-H5A-48 SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SIGNS SHALL BE MOUNTED AT THE APPROPRIATE OFFSETS AND ELEVATIONS AS PRESCRIBED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE MAINTAINED ON SUPPORTS MEETING CURRENT SAFETY CRITERIA.

THE SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE CONSECUTIVE CALENDAR DAYS, SUCH AS DURING WINTER SHUT-DOWNS.

THE R11-H5A-48 SIGNS SHALL BE MOUNTED ON 2 NO. 3 POSTS WHEN LOCATED WITHIN CLEAR ZONES.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE RETROREFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF C&MS 730.19.

WORK ZONE INCREASED PENALTIES SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND RE-ERECTED AT ANOTHER LOCATION AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVAL OF THE SIGN AND SUPPORT.

ITEM 614, WORK ZONE INCREASED PENALTIES SIGN 6 EACH

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.

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 THE 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 AND PIO*
RAMP AND/OR ROAD CLOSURES	2 WEEKS OR GREATER	21 CALENDAR DAYS
	12 HOURS TO 2 WEEKS	14 CALENDAR DAYS
	12 HOURS OR LESS	4 BUSINESS DAYS

LANE CLOSURES AND RESTRICTIONS	2 WEEKS OR GREATER	14 CALENDAR DAYS
	LESS THAN 2 WEEKS	5 BUSINESS DAYS

START OF CONSTRUCTION AND TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS
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* - PRIOR TO CLOSURE DATE, UNLESS NOTED OTHERWISE

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

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 1 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 PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.) THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

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

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

ITEM 614 – PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
12 SIGN MONTHS
ASSUMING 4 PCMS SIGN(S) FOR 3 MONTH(S)

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

CAD 01/15/21

PROJECT ID

110853

SHEET

P.9

TOTAL

44

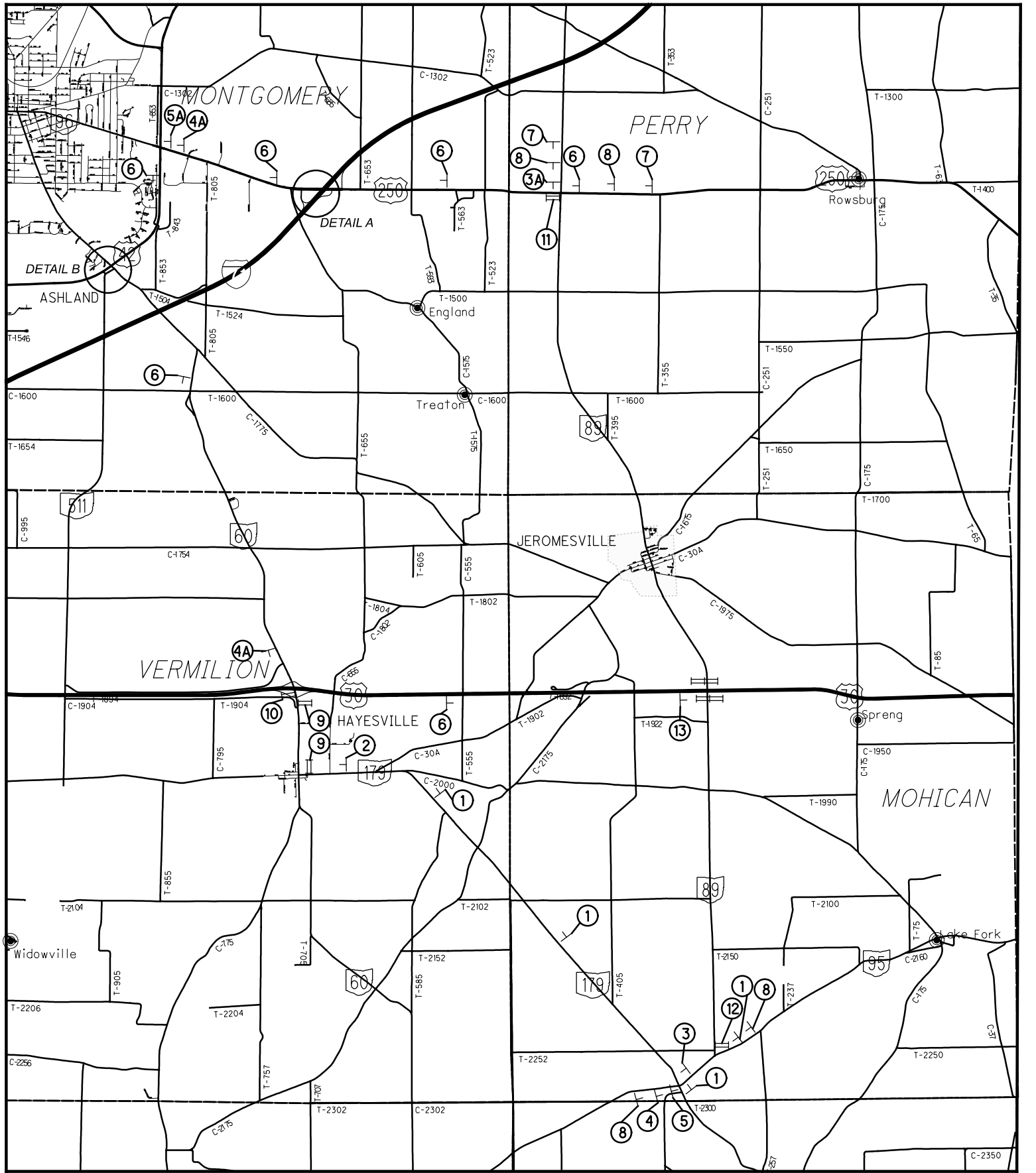
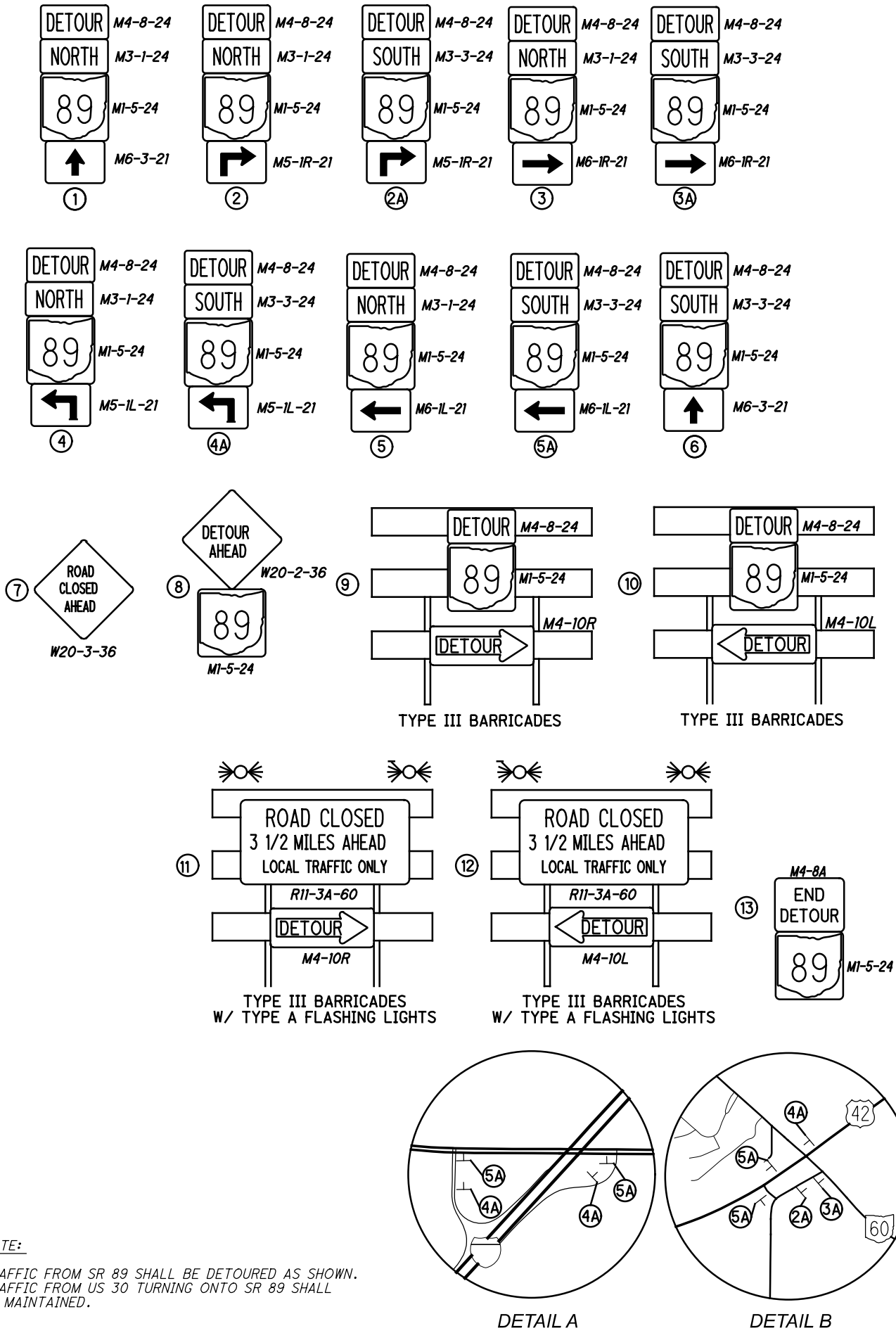
CONSTRUCTION WORK SEQUENCE

IN AN EFFORT TO MAINTAIN TRAFFIC, PROVIDE A MINIMAL IMPACT TO TRAFFIC, AND MAINTAIN PROJECT SAFETY, COMPLETE WORK USING THE FOLLOWING GENERAL SEQUENCE OF WORK:

1. COMPLETE THE REMOVAL OF THE EXISTING PAVEMENT ON THE OUTSIDE OF US 30 AT THE SR 89 INTERSECTION. COMPLETE CONSTRUCTION OF ALL ASPECTS OF THE PAVEMENT IN THE SAME AREAS INCLUDING ALL PROPOSED US 30 RIGHT TURN LANES PAVEMENT MARKINGS. COMPLETE ALL DRAINAGE WORK WITHIN THIS AREA.
2. CONSTRUCT THE PROPOSED US 30 LEFT TURN LANES AT SR 89, OR AS OTHERWISE DIRECTED BY THE ENGINEER TO ENSURE ADEQUATE SIGHT DISTANCE AT THE INTERSECTION. DO NOT CLOSE THE MEDIAN CROSSOVER AT THE SR 89 INTERSECTION. COMPLETE THE CONSTRUCTION OF ALL ASPECTS OF THE PAVEMENT IN THE SAME AREAS INCLUDING ALL PAVEMENT MARKINGS. COMPLETE ALL DRAINAGE WORK IN THIS AREA ABLE TO BE COMPLETED WITHOUT THE REMOVAL OF THE EXISTING MEDIAN CROSSOVER AT THE SR 89 INTERSECTION.
3. INSTALL ALL SIGNS ON THE PROJECT AS DIRECTED BY THE ENGINEER.
4. CLOSE THE MEDIAN CROSSOVER AT THE SR 89 INTERSECTION.
5. REMOVE ALL PAVEMENT IN THE EXISTING MEDIAN CROSSOVER AT THE SR 89 INTERSECTION. COMPLETE ALL GRADING IN THIS AREA. INSTALL CUSTOM SIGNS AS DIRECTED BY THE ENGINEER AS SOON AS POSSIBLE AFTER CLOSING THE INTERSECTION. COMPLETE ALL DRAINAGE NOT PREVIOUSLY INSTALLED. COMPLETE THE INSTALLATION OF THE GEORUNNER MATS AND CONSTRUCT THE REMAINDER OF THE LEFT TURN LANES AT SR 89. AN INTERIM COMPLETION DATE FOR OPENING THE SR 89 INTERSECTION TO ITS NEW PROPOSED TRAFFIC CONFIGURATION, WHICH INCLUDES, BUT IS NOT LIMITED TO, CLOSING THE MEDIAN OF THE US 30 AND SR 89 INTERSECTION TO NORTH/SOUTH THROUGH TRAFFIC AND EAST/WEST LEFT TURNS, RE-DIRECTING THIS TRAFFIC TO THE U-TURNS ON US 30, AND COMPLETING ALL PROPOSED U-TURN AND TURN LANE PAVEMENT, AS WELL AS PROPOSED DRAINAGE, GRADING, TRAFFIC CONTROL, AND EITHER TEMPORARY OR PERMANENT SEEDING AND LIGHTING AT US 30 AND SR 89, IS SEPTEMBER 30, 2021.
6. COMPLETE ALL FINAL PAVEMENT MARKINGS, SEEDING AND MULCHING, BMP INSTALLATION, AND ALL OTHER ITEMS OF WORK NOT PREVIOUSLY COMPLETED.

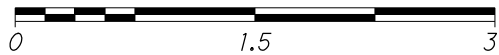
ALL PERMANENT LIGHTING SHALL BE OPERATIONAL PRIOR TO OPENING THE PROPOSED MEDIAN CROSSOVERS AND LOONS TO TRAFFIC. IF THE PERMANENT LIGHTING IS NOT ABLE TO BE COMPLETED PRIOR TO OPENING THE PROPOSED MEDIAN CROSSOVERS AND LOONS TO TRAFFIC, SUPPLY TEMPORARY LIGHTING. SUPPLY A TEMPORARY LIGHTING PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLING ANY SUCH LIGHTING. ALL COSTS FOR ANY TEMPORARY LIGHTING SHALL BE CONSIDERED INCIDENTAL TO THE LUMP SUM BID FOR MAINTENANCE OF TRAFFIC.

SIGN LEGEND



- GATES AND BARRICADES, CLOSE APPROACH TO US 30 AS PER MT-101.60

SCALE IN MILES



NOTE:

TRAFFIC FROM SR 89 SHALL BE DETOURED AS SHOWN.
TRAFFIC FROM US 30 TURNING ONTO SR 89 SHALL
BE MAINTAINED.

MODEL: Sheet PAPER: 17x11 (in.) DATE: 4/15/2021 TIME: 8:50:16 AM USER: meppley
pwc:\hobol-pw-bentley.com\shlodo-pw-02\Documents\01 Active Projects\District 03\Ashtand\110853\400-Engineering\Roadway\Sheets\110853_GG001.dgn

SHEET NUM.											PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	7	8	9	15	33	34	36	37	43		01/SAF/OT						
																ROADWAY	
						1					LUMP	201	11000	LS		CLEARING AND GRUBBING	
						4,507					1	202	20010	1	EACH	HEADWALL REMOVED	
				4,507		96					4,507	202	23000	4,507	SY	PAVEMENT REMOVED	
						10					96	202	35100	96	FT	PIPE REMOVED, 24" AND UNDER	
											10	202	35200	10	FT	PIPE REMOVED, OVER 24"	
					912.5						912.5	202	38000	912.5	FT	GUARDRAIL REMOVED	
						3					3	202	58100	3	EACH	CATCH BASIN REMOVED	
					1						1	202	42010	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E	
					2						2	202	42040	2	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
				6,567							6,567	203	10000	6,567	CY	EXCAVATION	
				6,668							6,668	203	20000	6,668	CY	EMBANKMENT	
	1,815										1,815	203	35110	1,815	CY	GRANULAR MATERIAL, TYPE B	
				9,371							9,371	204	10000	9,371	SY	SUBGRADE COMPACTION	
	1,815										1,815	204	13000	1,815	CY	EXCAVATION OF SUBGRADE	
	3			5							8	204	45000	8	HOUR	PROOF ROLLING	
	5,445										5,445	204	50000	5,445	SY	GEOTEXTILE FABRIC	
					887.5						887.5	606	15050	887.5	FT	GUARDRAIL, TYPE MGS	
					2						2	606	26150	2	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	
					1						1	606	26550	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
				1,216							1,216	SPECIAL	69012060	1,216	SY	PAVEMENT OVERLAY FABRIC COMPOSITE	5
																EROSION CONTROL	
						39					39	601	21050	39	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
		40									40	616	10000	40	MGAL	WATER	
				2							2	659	00100	2	EACH	SOIL ANALYSIS TEST	
				2,025							2,025	659	00300	2,025	CY	TOPSOIL	
				56							56	659	00300	56	CY	TOPSOIL (4" THICK)	
				18,243							18,243	659	10000	18,243	SY	SEEDING AND MULCHING	
				913							913	659	14000	913	SY	REPAIR SEEDING AND MULCHING	
				913							913	659	15000	913	SY	INTER-SEEDING	
				3							3	659	20000	3	TON	COMMERCIAL FERTILIZER	
				4							4	659	31000	4	ACRE	LIME	
				101							101	659	35000	101	MGAL	WATER	
				500							500	670	00700	500	SY	DITCH EROSION PROTECTION (7.5' WIDE AVERAGE)	
											LUMP	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
											LUMP	832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
											LUMP	832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
											10,000	832	30000	10,000	EACH	EROSION CONTROL	
																DRAINAGE	
						1					1	602	20000	1	CY	CONCRETE MASONRY	
						2,167					2,167	605	05110	2,167	FT	4" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
						4,086					4,086	605	06020	4,086	FT	4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
120											120	611	00400	120	FT	4" CONDUIT, TYPE E	6
						165					165	611	00410	165	FT	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	
						46					46	611	00200	46	FT	4" CONDUIT, TYPE C	
						10					10	611	01100	10	FT	6" CONDUIT, TYPE C	
						169					169	611	05900	169	FT	15" CONDUIT, TYPE B	
						58					58	611	06100	58	FT	15" CONDUIT, TYPE C	
						28					28	611	19600	28	FT	42" CONDUIT, TYPE C, 706.02	
						3					3	611	98470	3	EACH	CATCH BASIN, NO. 2-2B	
						6					6	611	99710	6	EACH	PRECAST REINFORCED CONCRETE OUTLET	
																PAVEMENT	
				973							973	254	01000	973	SY	PAVEMENT PLANING, ASPHALT CONCRETE (3.5")	
				2,734							2,734	301	46000	2,734	CY	ASPHALT CONCRETE BASE, PG64-22	
				1,626							1,626	304	20000	1,626	CY	AGGREGATE BASE	
				221							221	304	20000	221	CY	AGGREGATE BASE (AS BERM)	
				909							909	407	20000	909	GAL	NON-TRACKING TACK COAT	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

CAD 01/15/21

PROJECT ID

110853

SHEET

P.12

TOTAL

44

SHEET NUM.											PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	7	8	9	15	33	34	36	37	43		01/SAF/OT						
																PAVEMENT	
				397							397	408	10001	397	GAL	PRIME COAT, AS PER PLAN	5
				380							380	442	20000	380	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448) (PG76-22M)	
				506							506	442	20200	506	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448) (PG76-22M)	
				4,029							4,029	618	40100	4,029	FT	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
																LIGHTING	
								24			24	625	00450	24	EACH	CONNECTION, FUSED PULL APART	
								36			36	625	00480	36	EACH	CONNECTION, UNFUSED PERMANENT	
								12			12	625	10490	12	EACH	LIGHT POLE, CONVENTIONAL, AT18B40	
								12			12	625	14100	12	EACH	LIGHT POLE FOUNDATION, 24" X 8' DEEP	
								2,112			2,112	625	23302	2,112	FT	NO. 6 AWG 2400 VOLT DISTRIBUTION CABLE	
								2,088			2,088	625	23400	2,088	FT	NO. 10 AWG POLE AND BRACKET CABLE	
								2,591			2,591	625	24324	2,591	FT	1-1/2" DUCT CABLE WITH THREE NO. 6 AWG 2400 VOLT CABLES	
								30			30	625	25500	30	FT	CONDUIT, 3", 725.04	
								574			574	625	25902	574	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"	
								12			12	625	26253	12	EACH	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, IES-III, 3000K, 8500-12900 LUMENS	7
								2,441			2,441	625	29000	2,441	FT	TRENCH	
								5			5	625	30700	5	EACH	PULL BOX, 725.08, 18"	
								7			7	625	30706	7	EACH	PULL BOX, 725.08, 24"	
								13			13	625	32000	13	EACH	GROUND ROD	
								1			1	625	34001	1	EACH	POWER SERVICE, AS PER PLAN	6
								2,441			2,441	625	36010	2,441	FT	UNDERGROUND WARNING/MARKING TAPE	
								1			1	625	76000	1	EACH	ARC FLASH CALCULATIONS AND LABEL (US 30 & SR 89)	
								1			1	632	70400	1	EACH	CONDUIT RISER, 2" DIAMETER	
								1			1	633	67200	1	EACH	CONTROLLER WORK PAD	
																TRAFFIC CONTROL	
							52				52	621	00100	52	EACH	RPM	
							12				12	621	54000	12	EACH	RAISED PAVEMENT MARKER REMOVED	
									1,866		1,866	630	03101	1,866	FT	GROUND MOUNTED SUPPORT, NO. 3 POST, AS PER PLAN	7
									88		88	630	07500	88	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X22	
									92		92	630	07600	92	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12	
									152		152	630	08600	152	EACH	SIGN POST REFLECTOR	
									8		8	630	09000	8	EACH	BREAKAWAY STRUCTURAL BEAM CONNECTION	
									510		510	630	80100	510	SF	SIGN, FLAT SHEET	
									600		600	630	80200	600	SF	SIGN, GROUND MOUNTED EXTRUSHEET	
									4		4	630	82000	4	EACH	SIGN BACKING ASSEMBLY	
									8		8	630	84500	8	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	
									33		33	630	84900	33	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
									41		41	630	86002	41	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
							1.07				1.07	644	00104	1.07	MILE	EDGE LINE, 6"	
							2,000				2,000	644	00404	2,000	FT	CHANNELIZING LINE, 12"	
								258			258	644	00700	258	FT	TRANSVERSE/DIAGONAL LINE	
								10			10	644	01300	10	EACH	LANE ARROW	
								6			6	644	01301	6	EACH	LANE ARROW, AS PER PLAN	36
								2			2	644	01410	2	EACH	WORD ON PAVEMENT, 96"	
								1,988			1,988	644	01510	1,988	FT	DOTTED LINE, 6"	
								24			24	644	20800	24	FT	YIELD LINE	
							1,160				1,160	644	30000	1,160	FT	REMOVAL OF PAVEMENT MARKING	
																MAINTENANCE OF TRAFFIC	
			10	6							6	614	12484	6	EACH	WORK ZONE INCREASED PENALTIES SIGN	9
				12							10	614	13000	10	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
											12	614	18601	12	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	9
			4								4	614	40051	4	EACH	BUSINESS ENTRANCE SIGN, AS PER PLAN	8
				20							20	808	18700	20	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	9
																INCIDENTALS	
											LUMP	614	11000	LS		MAINTAINING TRAFFIC	
											5	619	16010	5	MNTH	FIELD OFFICE, TYPE B	
											LUMP	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
											LUMP	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

CAD 01/15/21

PROJECT ID

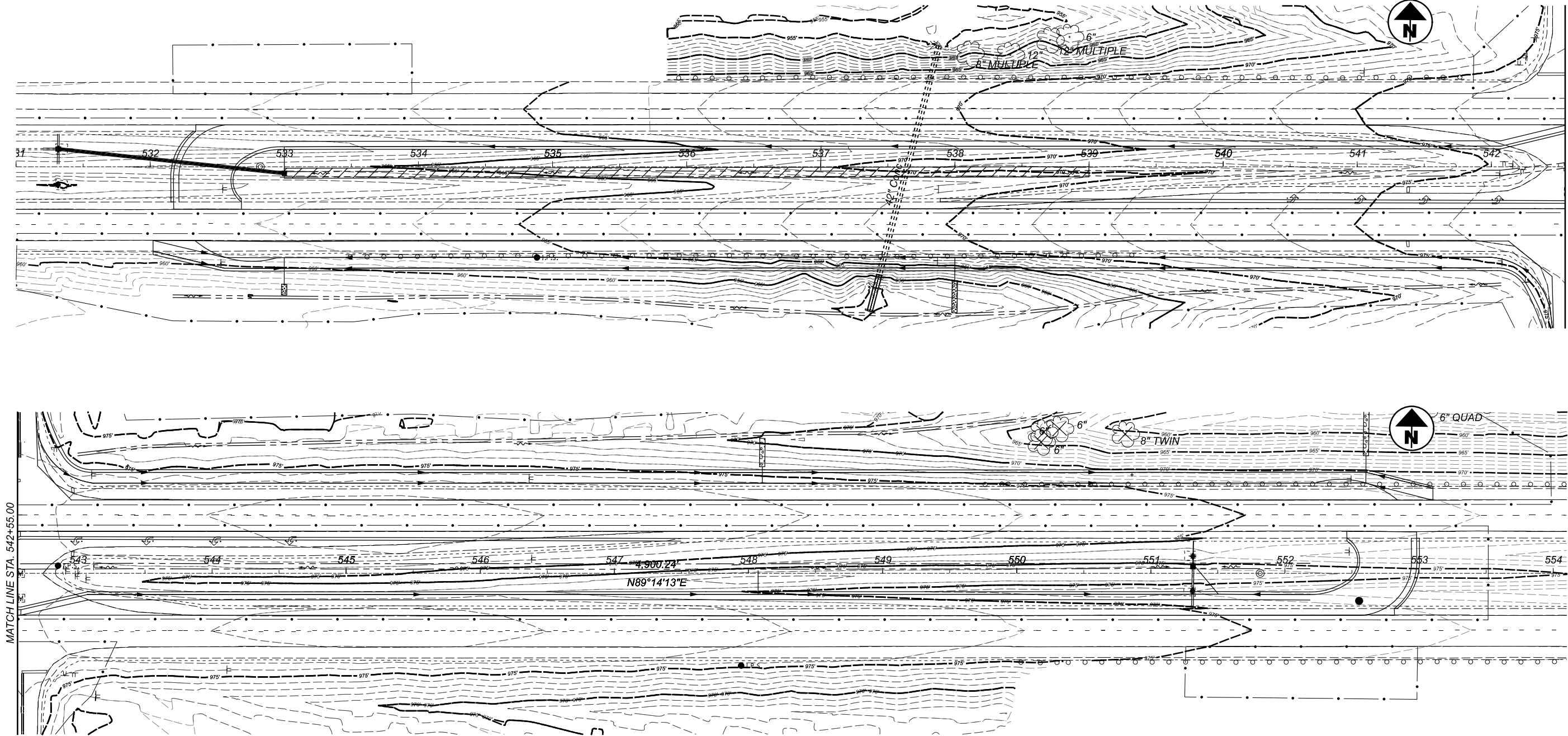
110853

SHEET

P.13

TOTAL

44



BMP LOCATIONS						
BMP	FEATURE	ROUTE	OFFSET	STATION	LATITUDE (N)	LONGITUDE (W)
1	VBF	US 30	C	533+00	40.784980°	82.187700°
			C	539+00	40.784997°	82.185414°

PROJECT DATA			
TOTAL AREA (RIGHT-OF-WAY):	14.80 AC	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE:	0.90
PROJECT EARTH DISTURBED AREA:	5.425 AC	RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE:	0.90
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 AC	POST-CONSTRUCTION BMP:	VEGETATED BIOFILTERS
NOTICE OF INTENT EARTH DISTURBED AREA:	5.675 AC	QUAD MAPS:	JEROMESVILLE QUADRANGLE
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE:	3.95 AC	IMMEDIATE RECEIVING WATER:	UNNAMED ROADSIDE DITCH
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE:	5.01 AC	SUBSEQUENT RECEIVING WATER:	JEROME FORK

- LEGEND
- - PROPOSED CATCH BASIN
 - ▨ - EXISTING CONDUIT
 - ▧ - EXISTING CATCH BASIN
 - ▩ - VEGETATED BIOFILTER
 - ▬ - PROPOSED CONDUIT

PROJECT DESCRIPTION

THIS PROJECT IS AN INTERSECTION IMPROVEMENT OF US 30 & SR 89 IN ASHLAND COUNTY BY THE INSTALLATION OF AN RCUT. PAVEMENT MARKINGS, SIGNAGE, AND HIGHWAY LIGHTING ARE ALSO INCLUDED.

LATITUDE: 40°47'06" N LONGITUDE: 82°11'05" W

POST CONSTRUCTION BMP

THE REQUIRED TREATMENT AREA FOR THE PROJECT IS 1.09 ACRES (20% OF 5.425 ACRES).
VEGETATED BIOFILTERS ARE PROVIDED IN THE PLANS THAT TREAT 1.18 ACRES.
THE TOTAL TREATMENT AREA FOR THE PROJECT IS 1.18 ACRES (> REQUIRED AREA).

PAVEMENT QUANTITIES

COUNTY	ROUTE	STATION			202	204	204	254	301		304		407		408		442		442		304		618	SPECIAL
					PAVEMENT REMOVED	SUBGRADE COMPACTION	PROOF ROLLING	PAVEMENT PLANING, ASPHALT CONCRETE (3.5")	ASPHALT CONCRETE BASE, PG64-22M		AGGREGATE BASE		NON TRACKING TACK COAT		PRIME COAT, AS PER PLAN		ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448) (PG76-22M)		ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A(448) (PG76-22M)		AGGREGATE BASE (AS BERM)		RUMBLE STRIP (ASPHALT CONCRETE)	PAVEMENT OVERLAY COMPOSITE
		BEGIN	END		SY	SY	HOUR	SY	INCH	CY	INCH	CY	GAL/SY	GAL	GAL/SY	GAL	INCH	CY	INCH	CY	IN. AVG.	CY	FT	SY
ASD	30	532+00	533+00		141	583	5	37	10.50	170	6.00	101	0.05	57	0.40	20	2.00	32	1.50	24	8.00	11	100	46
ASD	30	533+00	542+00		1734	3716		400	10.50	1084	6.00	645	0.05	360	0.40	160	2.00	200	1.50	150	8.00	89	1800	500
ASD	30	542+00	543+10		686	764		98	10.50	223	6.00	133	0.05	74	0.40	35	2.00	42	1.50	31	8.00	20	220	122
ASD	30	543+10	552+19		1814	3754		404	10.50	1095	6.00	651	0.05	364	0.40	162	2.00	202	1.50	152	8.00	90	1818	505
ASD	30	552+19	553+10		132	554		34	10.50	162	6.00	96	0.05	54	0.40	20	2.00	30	1.50	23	8.00	11	91	43
TOTALS CARRIED TO GENERAL SUMMARY					4507	9371	5	973	2734		1626		909		397		506		380		221		4029	1216

SEEDING AND MULCHING QUANTITIES

REFERENCE SHEET (CROSS SECTION SHEET NUMBER)	203		659							
	EXCAVATION	EMBANKMENT	SEEDING AND MULCHING	SOIL ANALYSIS TEST	TOPSOIL	REPAIR SEEDING AND MULCHING	INTERSEEDING	COMMERCIAL FERTILIZER	LIME	WATER
	CY	CY	SY	EACH	CY	SY	SY	TON	ACRE	MGAL
21	287	115	639	2	2025	913	913	3	4	101
22	640	305	1911							
23	731	546	1778							
24	729	1198	2031							
25	432	480	1550							
26	820	428	1761							
27	713	644	2103							
28	490	368	1675							
29	636	510	1900							
30	528	1080	1676							
31	561	994	1219							
TOTALS	6567	6668	18243	2	2025	913	913	3	4	101

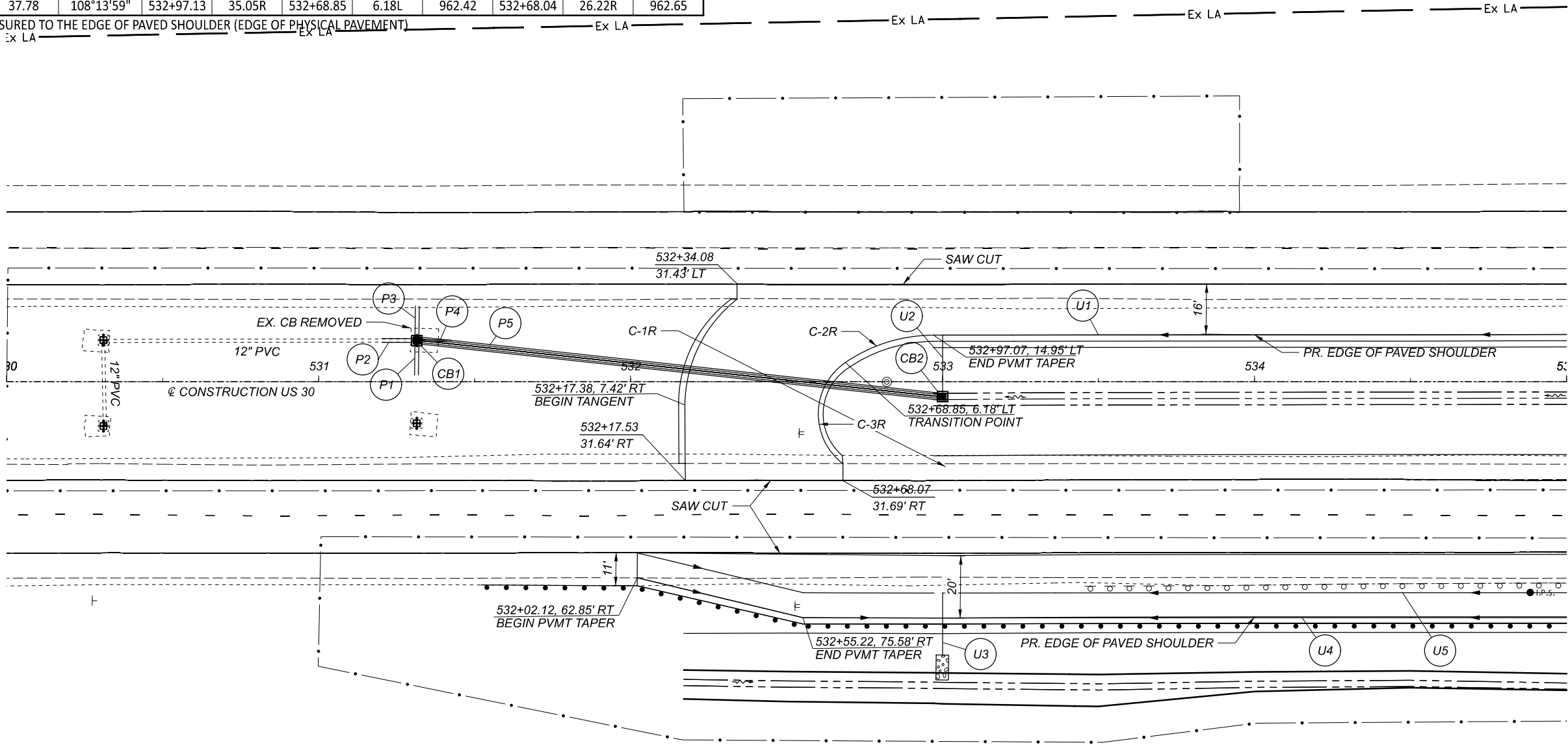
EROSION CONTROL QUANTITIES

STATION		LOCATION	659	670
			TOPSOIL (4" THICK)	DITCH EROSION PROTECTION (7.5' WIDE)
BEGIN	END		CY	SY
533+00	539+00	MEDIAN	56	500

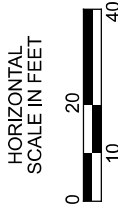
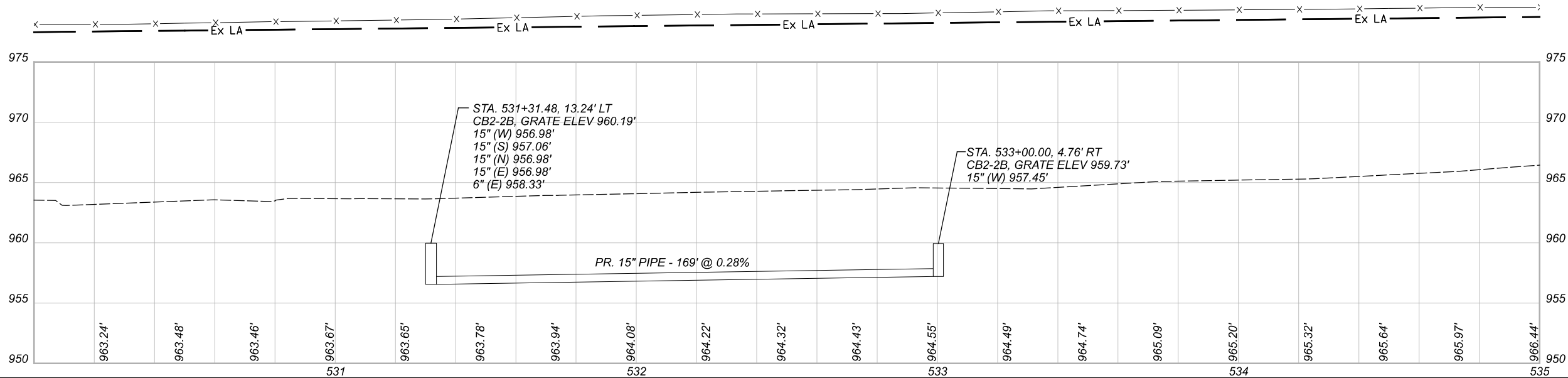


CURVE NUMBER	RADIUS	LENGTH	DELTA ANGLE	CENTER POINT		BEGIN POINT			END POINT		
	FEET	FEET	DMS	STATION	OFFSET	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION
C-1R	44.00	39.09	50°54'11"	532+61.38	8.01R	532+34.09	26.50L	962.54	532+17.38	7.42R	962.08
C-2R	50.00	30.00	34°22'39"	532+80.16	10.31R	532+97.07	14.95L	962.61	532+68.85	6.18L	962.42
C-3R	20.00	37.78	108°13'59"	532+97.13	35.05R	532+68.85	6.18L	962.42	532+68.04	26.22R	962.65

ALL DIMENSIONS ARE MEASURED TO THE EDGE OF PAVED SHOULDER (EDGE OF PHYSICAL PAVEMENT)



NOTES:
PROPOSED PAVEMENT MARKINGS,
LIGHTING, SIGNS, AND SIDE SLOPE
CUTS & FILLS ARE NOT SHOWN FOR CLARITY.



PLAN AND PROFILE
STA. 530+00 TO STA. 535+00

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

CAD 01/15/21

PROJECT ID

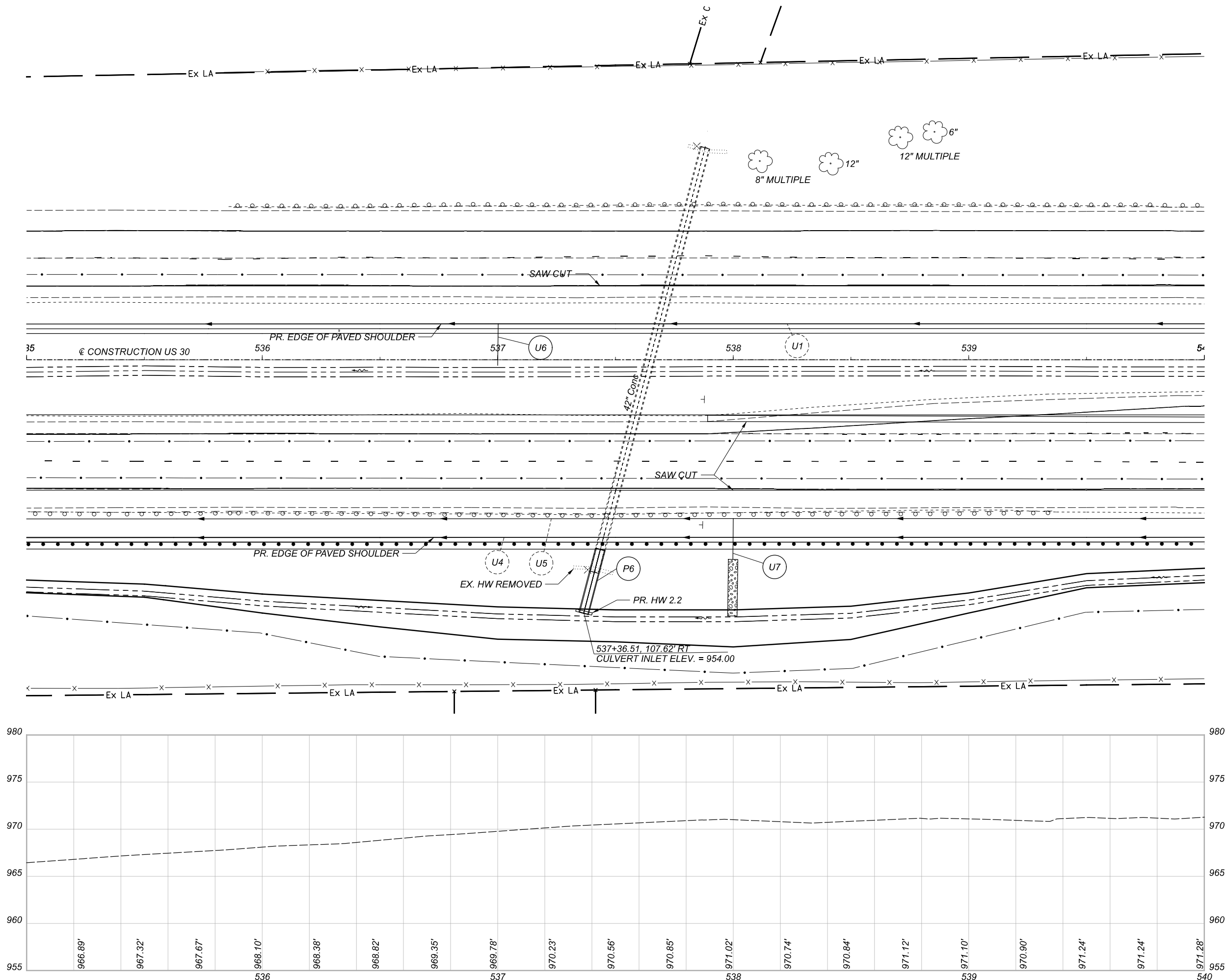
110853


SHEET

P.16

TOTAL

44






HORIZONTAL SCALE IN FEET

0 10 20 40

PLAN AND PROFILE

STA. 335+00 TO STA. 540+00

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

CAD 01/15/21

PROJECT ID

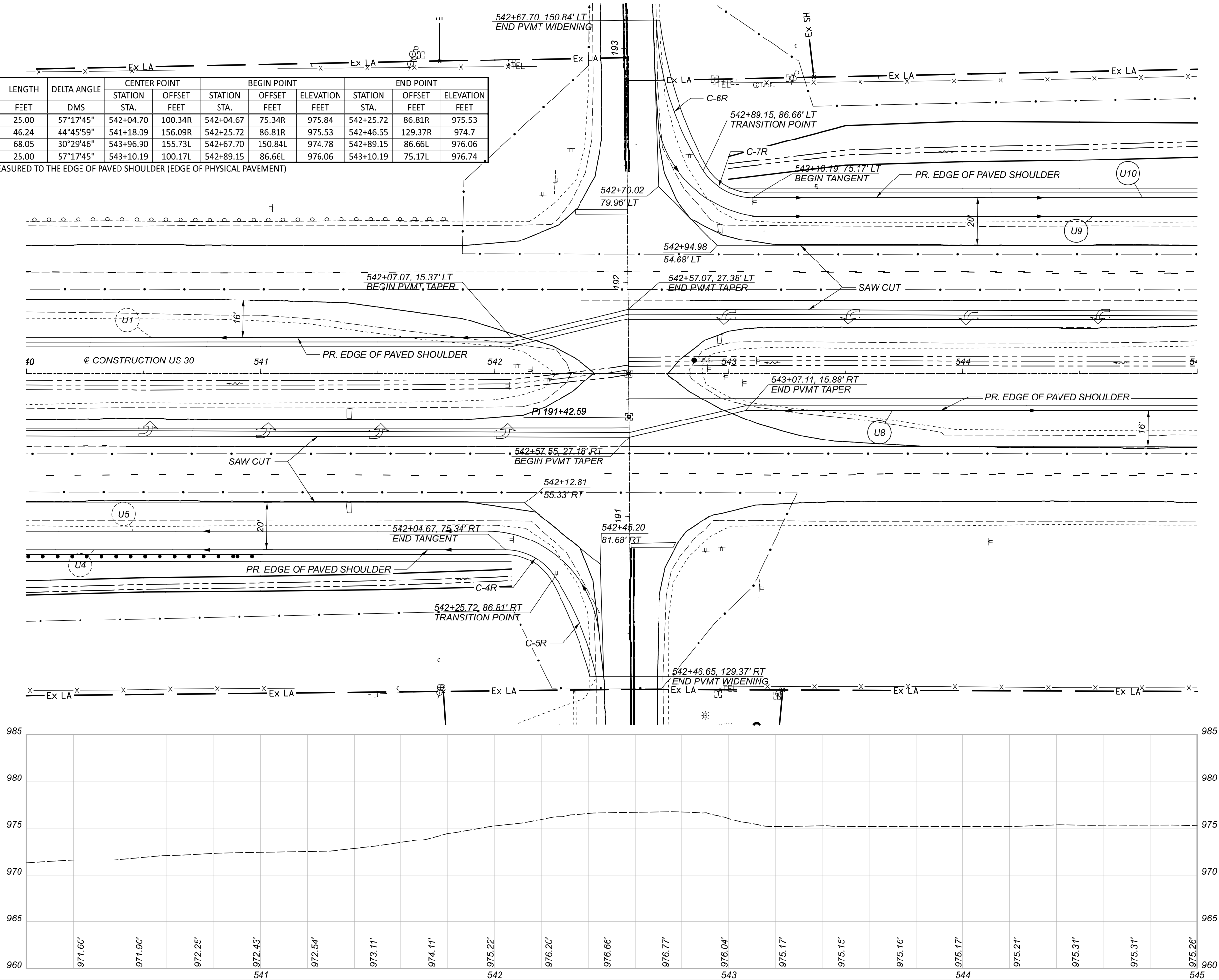
110853

SHEET TOTAL

P.17 44

CURVE NUMBER	RADIUS	LENGTH	DELTA ANGLE	CENTER POINT		BEGIN POINT			END POINT		
				STATION	OFFSET	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION
C-4R	25.00	25.00	57°17'45"	542+04.70	100.34R	542+04.67	75.34R	975.84	542+25.72	86.81R	975.53
C-5R	127.99	46.24	44°45'59"	541+18.09	156.09R	542+25.72	86.81R	975.53	542+46.65	129.37R	974.7
C-6R	127.86	68.05	30°29'46"	543+96.90	155.73L	542+67.70	150.84L	974.78	542+89.15	86.66L	976.06
C-7R	25.00	25.00	57°17'45"	543+10.19	100.17L	542+89.15	86.66L	976.06	543+10.19	75.17L	976.74

ALL DIMENSIONS ARE MEASURED TO THE EDGE OF PAVED SHOULDER (EDGE OF PHYSICAL PAVEMENT)



HORIZONTAL
SCALE IN FEET



PLAN AND PROFILE
STA. 540+00 TO 545+00

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

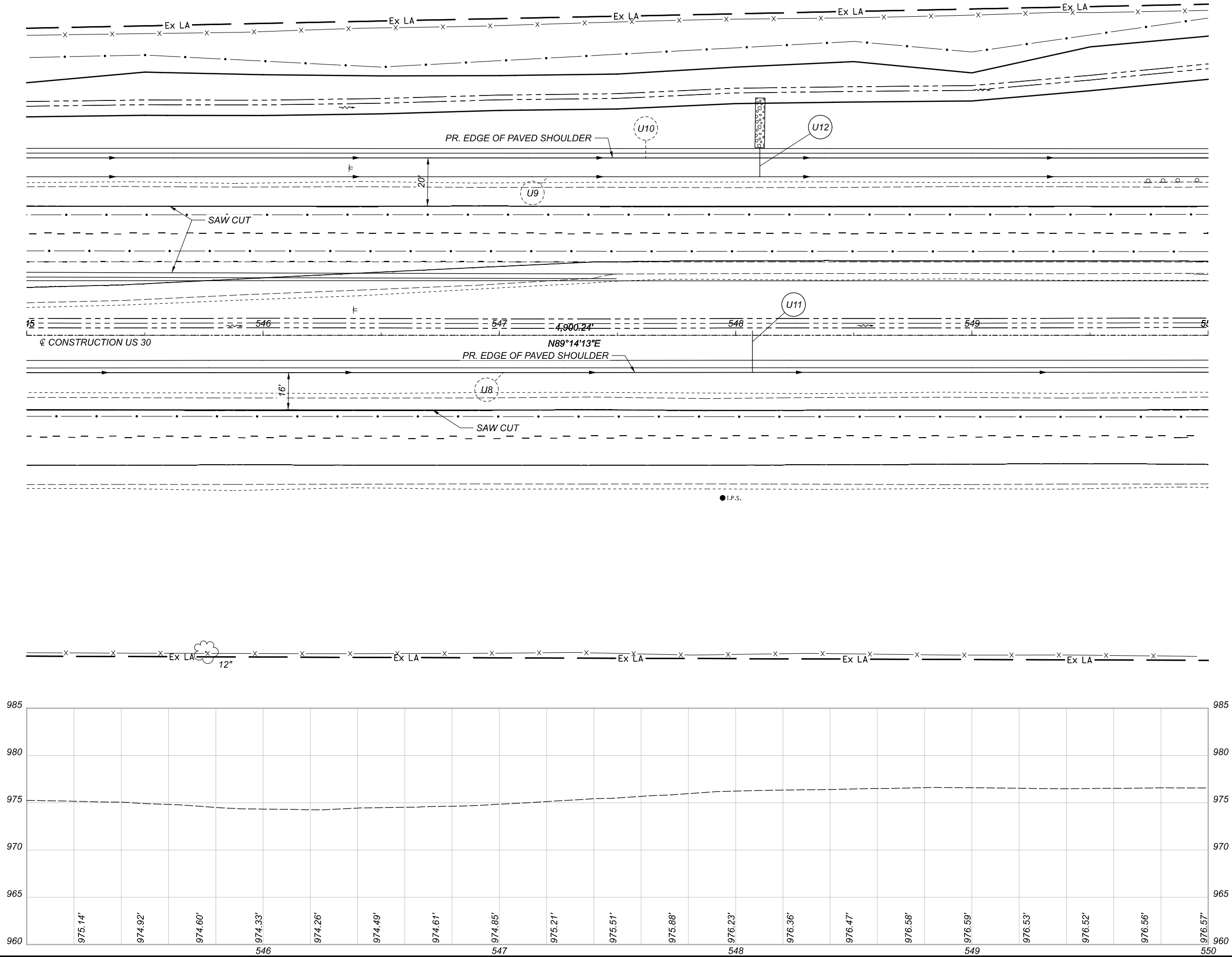
CAD 01/15/21


PROJECT ID

110853


SHEET TOTAL

P.18 44






HORIZONTAL SCALE IN FEET



PLAN AND PROFILE

STA. 545+00 TO STA. 550+00

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

CAD 01/15/21

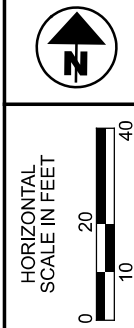
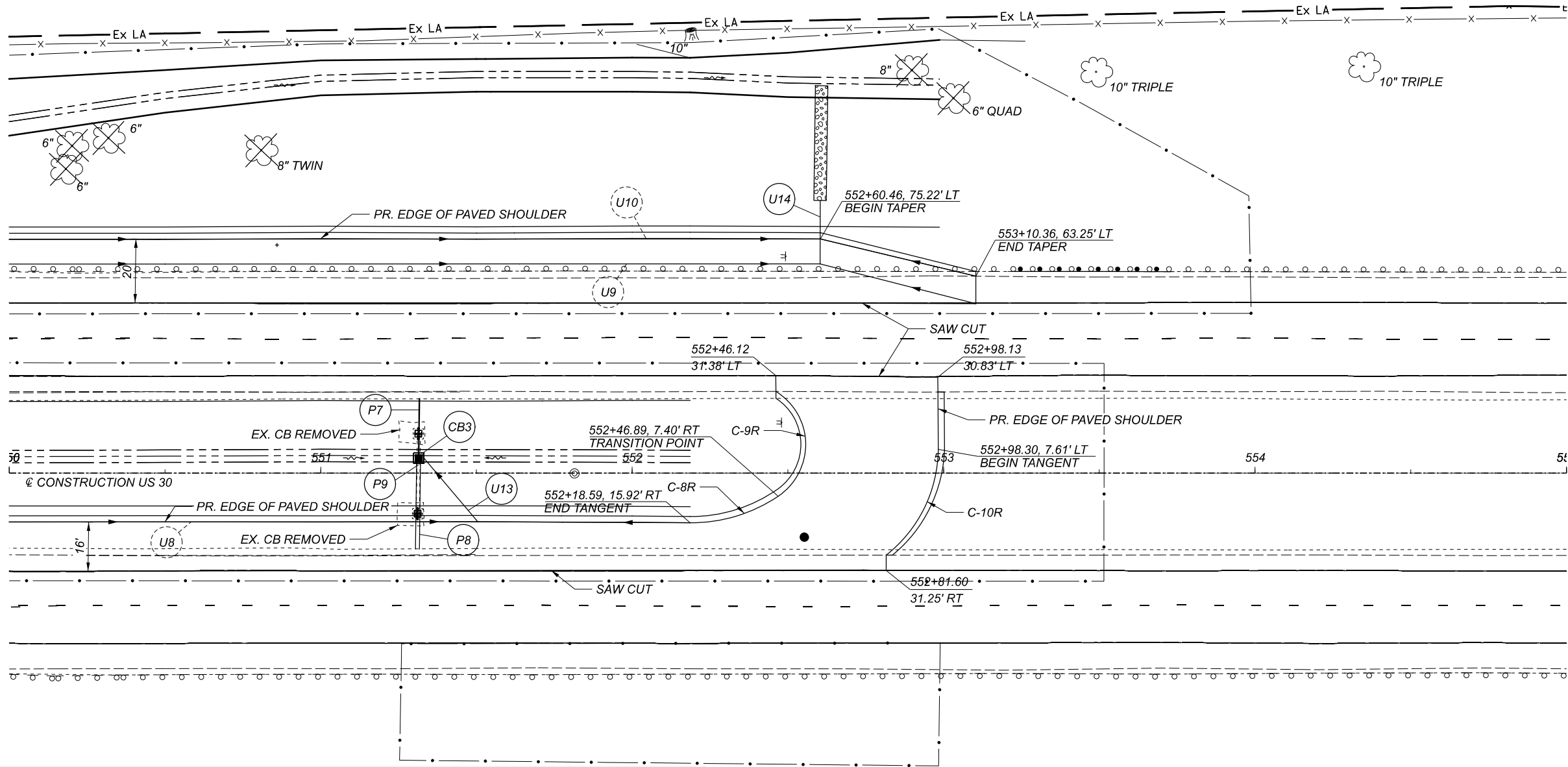
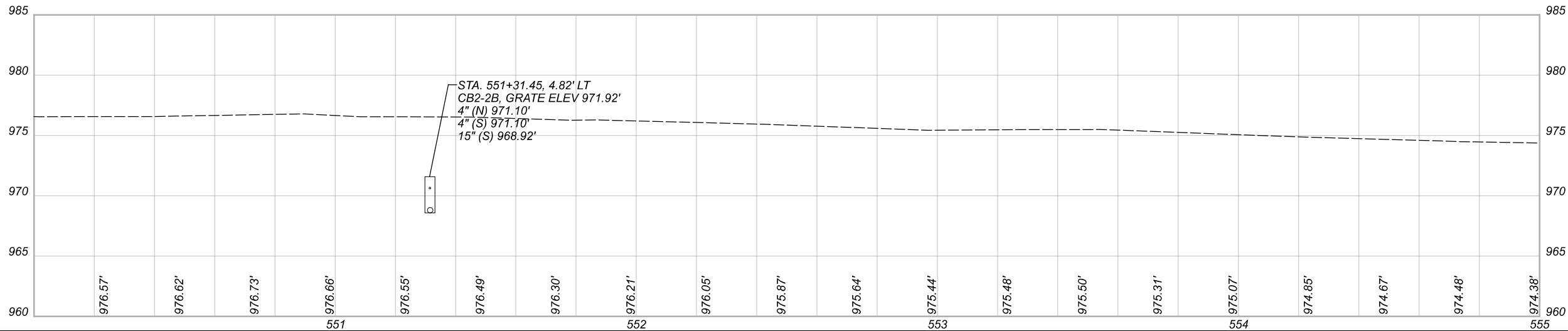
PROJECT ID

110853

SHEET	TOTAL
P.19	44

CURVE NUMBER	RADIUS	LENGTH	DELTA ANGLE	CENTER POINT		BEGIN POINT			END POINT		
	FEET			STATION	OFFSET	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION
C-8R	50.00	30.00	34°22'39"	552+18.97	34.07L	552+18.59	15.92R	974.22	552+46.89	7.40R	973.97
C-9R	20.00	40.00	114°32'55"	552+35.72	9.19L	552+46.89	7.40R	973.97	552+46.18	26.24L	974.3
C-10R	44.00	39.09	50°54'11"	552+54.30	8.19L	552+81.59	26.32R	974.07	552+98.30	7.61L	973.71

ALL DIMENSIONS ARE MEASURED TO THE EDGE OF PAVED SHOULDER (EDGE OF PHYSICAL PAVEMENT)



PLAN AND PROFILE
STA. 550+00 TO STA. 555+00

DESIGN AGENCY



DESIGNER
MAE

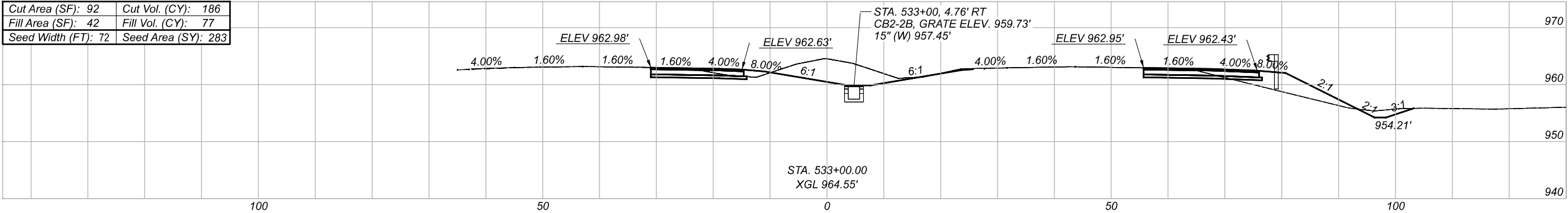
REVIEWER

CAD 01/15/21

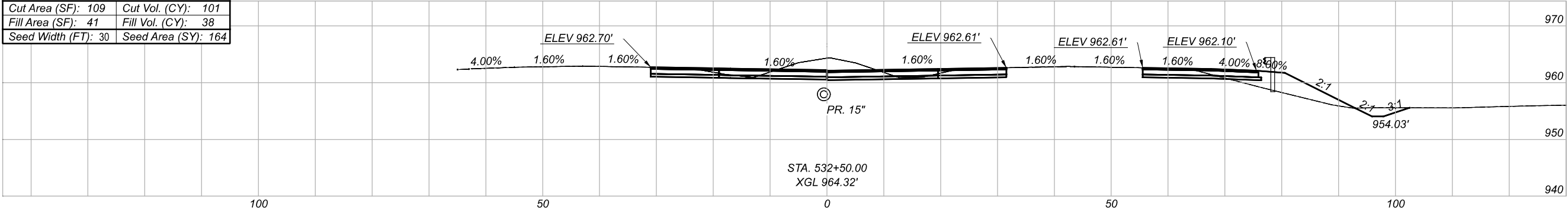
PROJECT ID
110853

SHEET TOTAL
P.20 44

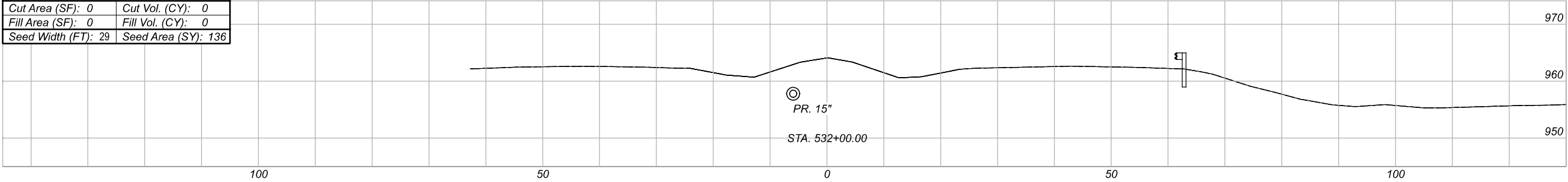
Cut Area (SF): 92	Cut Vol. (CY): 186
Fill Area (SF): 42	Fill Vol. (CY): 77
Seed Width (FT): 72	Seed Area (SY): 283



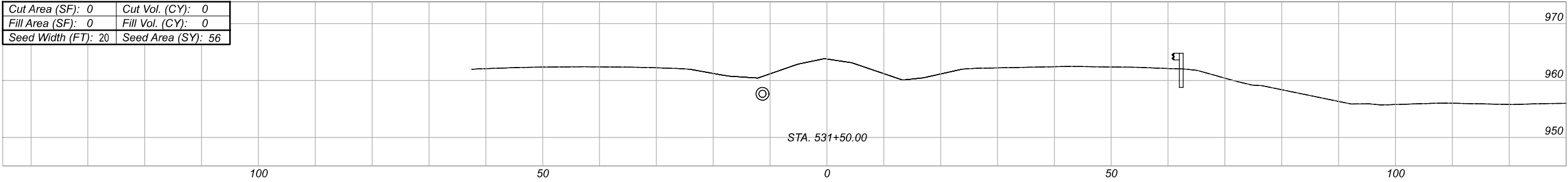
Cut Area (SF): 109	Cut Vol. (CY): 101
Fill Area (SF): 41	Fill Vol. (CY): 38
Seed Width (FT): 30	Seed Area (SY): 164



Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT): 29	Seed Area (SY): 136



Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT): 20	Seed Area (SY): 56



CROSS SECTIONS
STA. 531+50 TO STA. 533+00

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

CAD 01/15/21

PROJECT ID

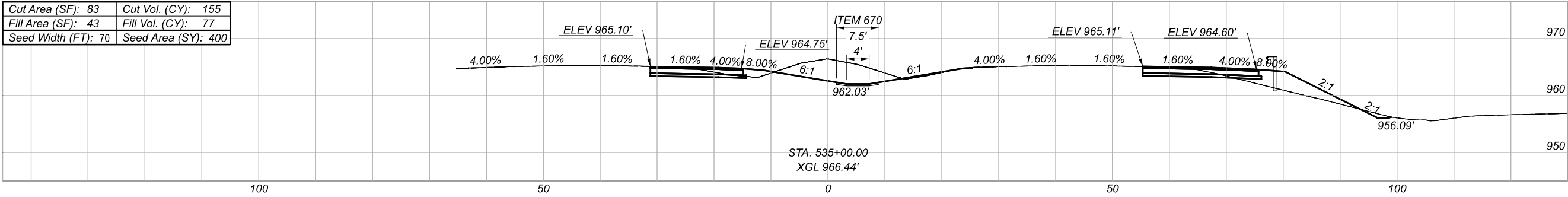
110853

Sheet Totals

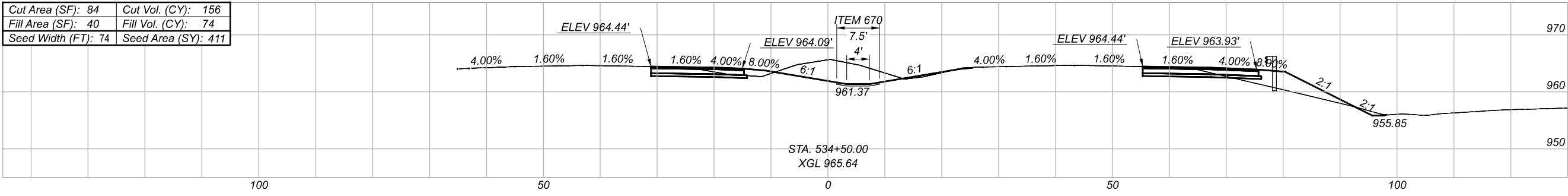
Seeding	Cut	Fill
639	287	145

SHEET	TOTAL
P.21	44

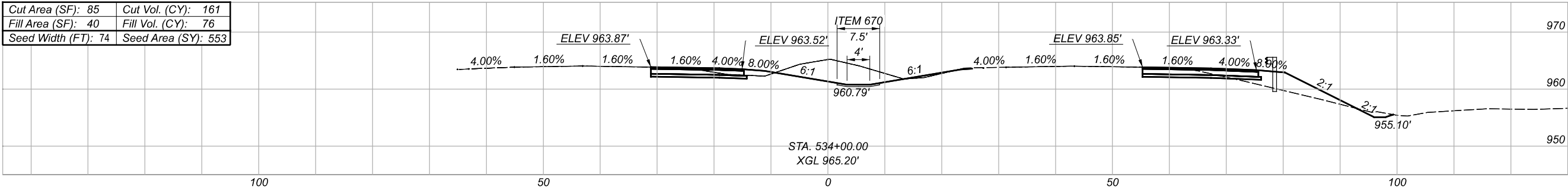
Cut Area (SF): 83	Cut Vol. (CY): 155
Fill Area (SF): 43	Fill Vol. (CY): 77
Seed Width (FT): 70	Seed Area (SY): 400



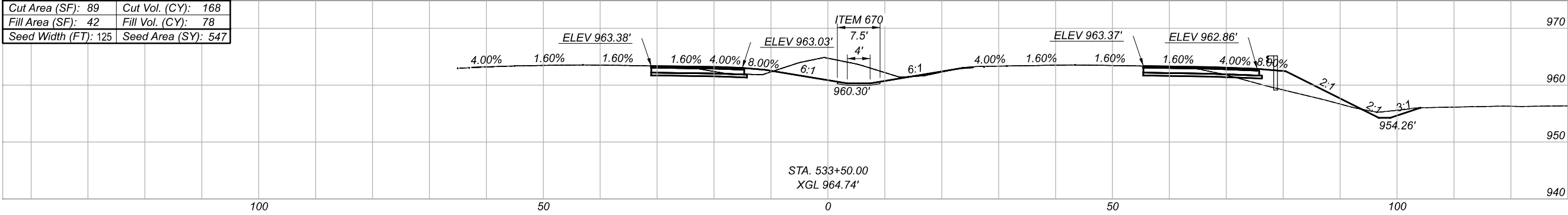
Cut Area (SF): 84	Cut Vol. (CY): 156
Fill Area (SF): 40	Fill Vol. (CY): 74
Seed Width (FT): 74	Seed Area (SY): 411



Cut Area (SF): 85	Cut Vol. (CY): 161
Fill Area (SF): 40	Fill Vol. (CY): 76
Seed Width (FT): 74	Seed Area (SY): 553



Cut Area (SF): 89	Cut Vol. (CY): 168
Fill Area (SF): 42	Fill Vol. (CY): 78
Seed Width (FT): 125	Seed Area (SY): 547



CROSS SECTIONS
STA. 533+50 TO STA. 535+00

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

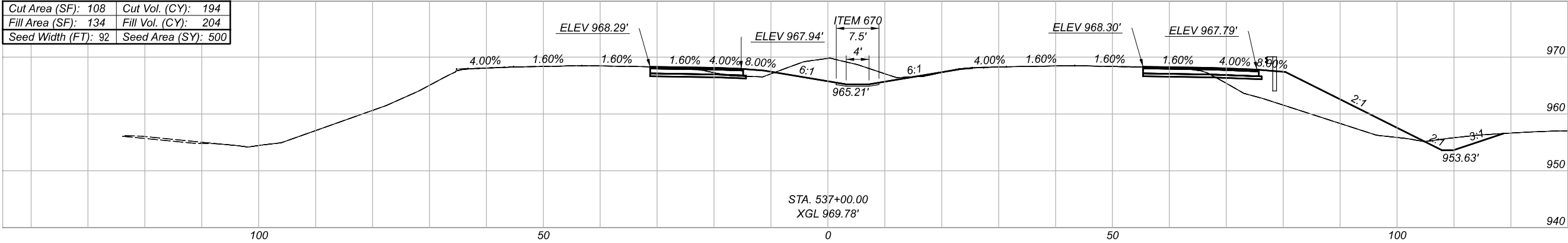
CAD 01/15/21

PROJECT ID

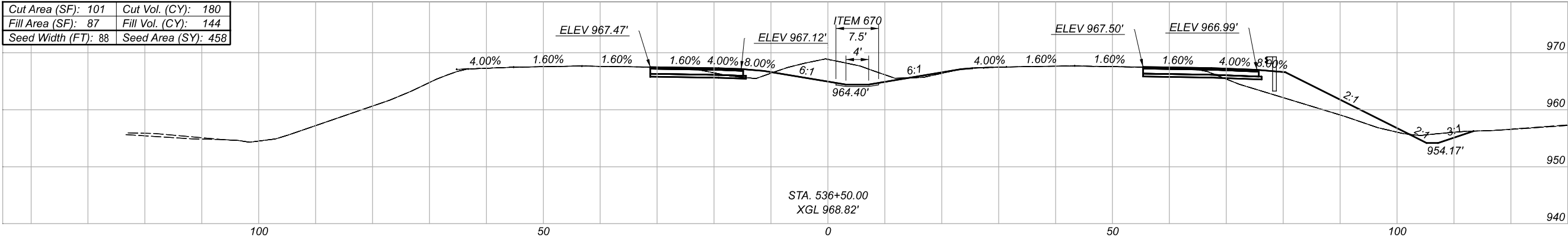
110853

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
1911	640	305	P.22	44

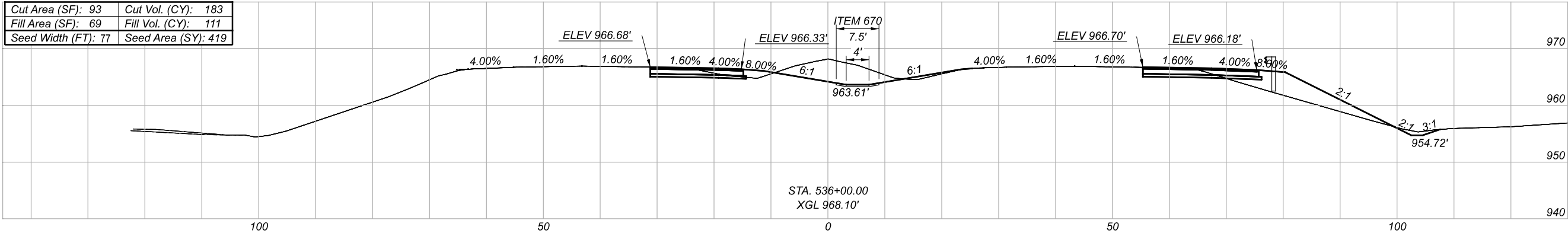
Cut Area (SF): 108	Cut Vol. (CY): 194
Fill Area (SF): 134	Fill Vol. (CY): 204
Seed Width (FT): 92	Seed Area (SY): 500



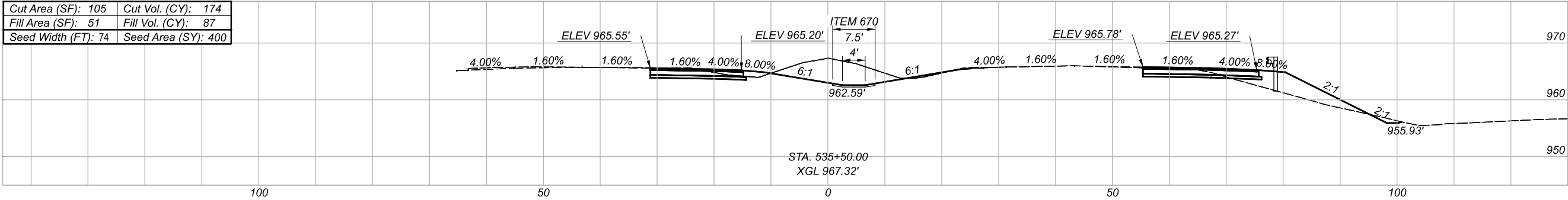
Cut Area (SF): 101	Cut Vol. (CY): 180
Fill Area (SF): 87	Fill Vol. (CY): 144
Seed Width (FT): 88	Seed Area (SY): 458



Cut Area (SF): 93	Cut Vol. (CY): 183
Fill Area (SF): 69	Fill Vol. (CY): 111
Seed Width (FT): 77	Seed Area (SY): 419



Cut Area (SF): 105	Cut Vol. (CY): 174
Fill Area (SF): 51	Fill Vol. (CY): 87
Seed Width (FT): 74	Seed Area (SY): 400



CROSS SECTIONS
STA. 535+50 TO STA. 537+00

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

CAD 01/15/21

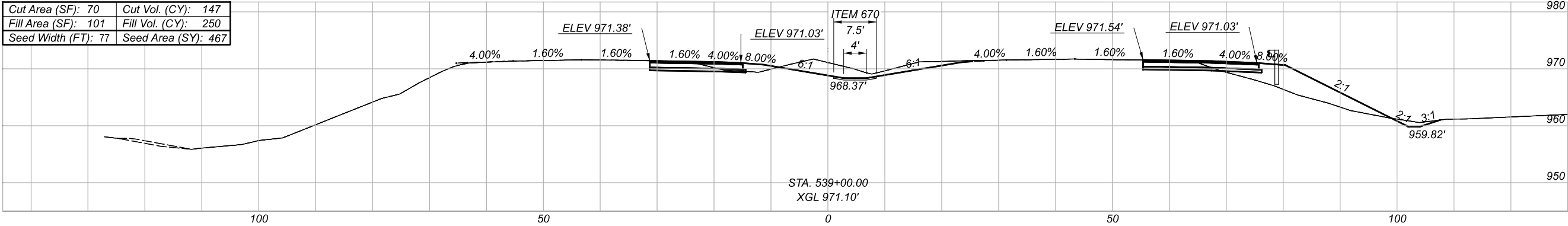
PROJECT ID

110853

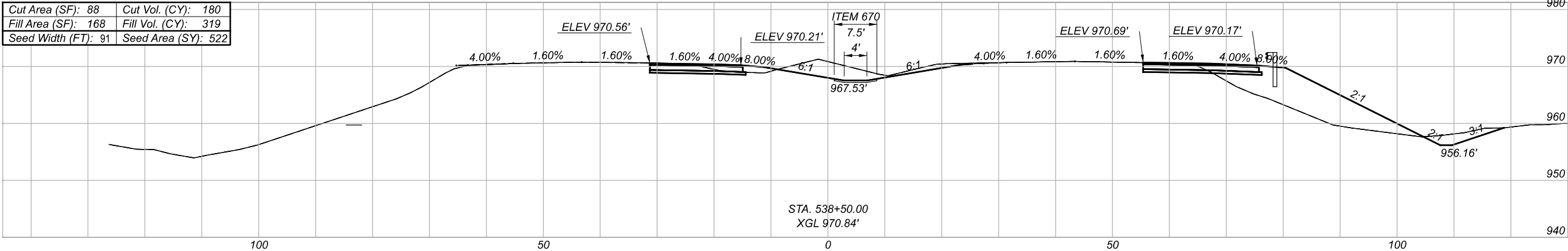
Sheet Totals		
Seeding	Cut	Fill
1778	731	546

SHEET	TOTAL
P.23	44

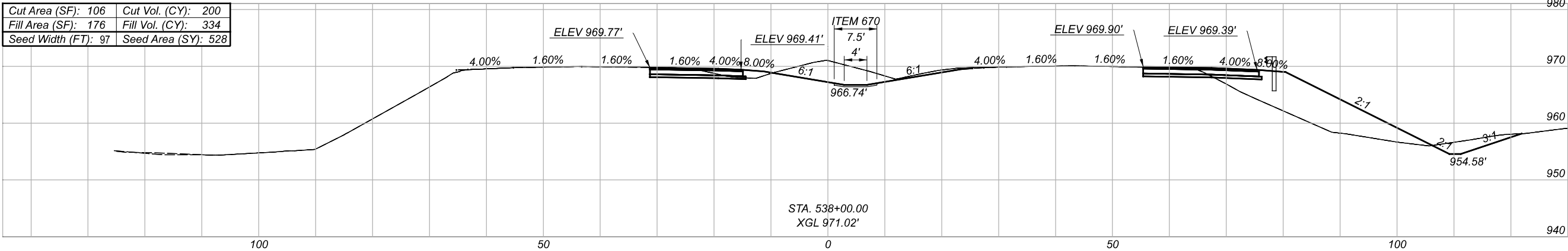
Cut Area (SF): 70	Cut Vol. (CY): 147
Fill Area (SF): 101	Fill Vol. (CY): 250
Seed Width (FT): 77	Seed Area (SY): 467



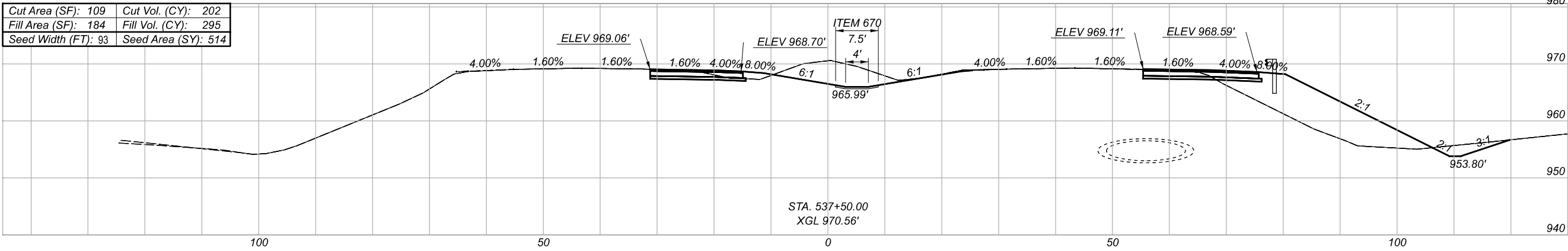
Cut Area (SF): 88	Cut Vol. (CY): 180
Fill Area (SF): 168	Fill Vol. (CY): 319
Seed Width (FT): 91	Seed Area (SY): 522



Cut Area (SF): 106	Cut Vol. (CY): 200
Fill Area (SF): 176	Fill Vol. (CY): 334
Seed Width (FT): 97	Seed Area (SY): 528



Cut Area (SF): 109	Cut Vol. (CY): 202
Fill Area (SF): 184	Fill Vol. (CY): 295
Seed Width (FT): 93	Seed Area (SY): 514



CROSS SECTIONS
STA. 537+50 TO STA. 539+00

DESIGN AGENCY



DESIGNER

MAE

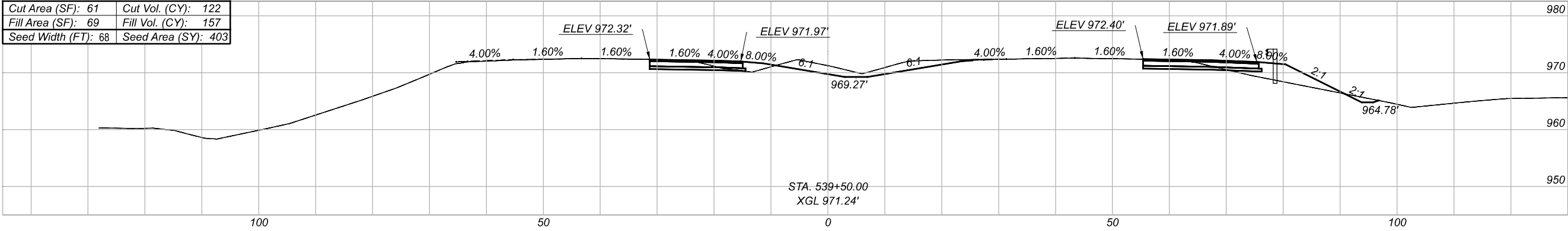
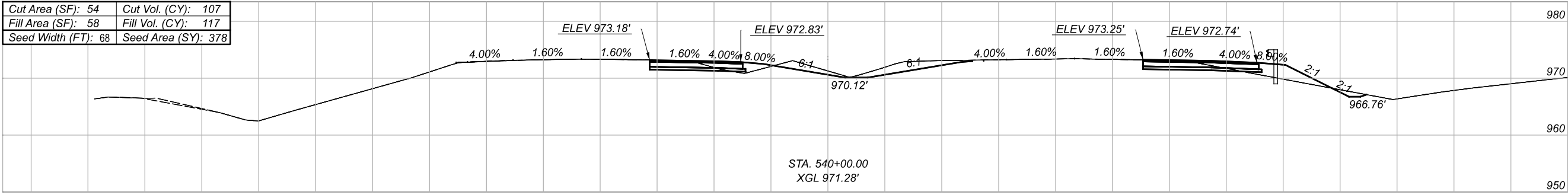
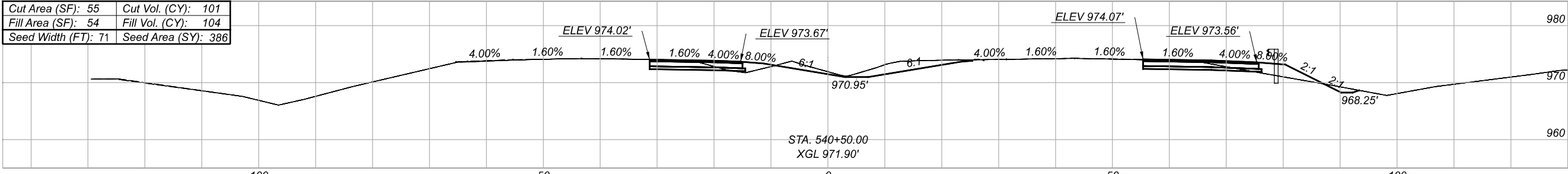
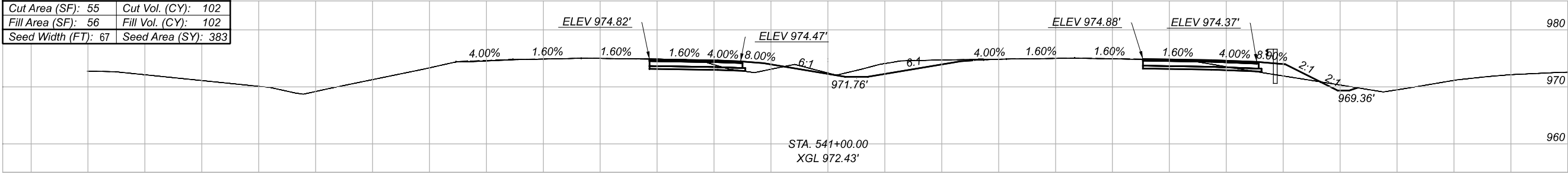
REVIEWER

CAD 01/15/21

PROJECT ID

110853

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
2631	729	1198	P.24	44



CROSS SECTIONS
STA. 539+50 TO STA. 541+00

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

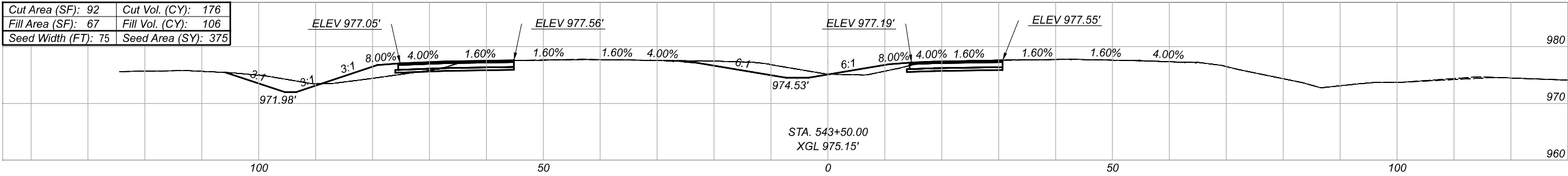
CAD 01/15/21

PROJECT ID

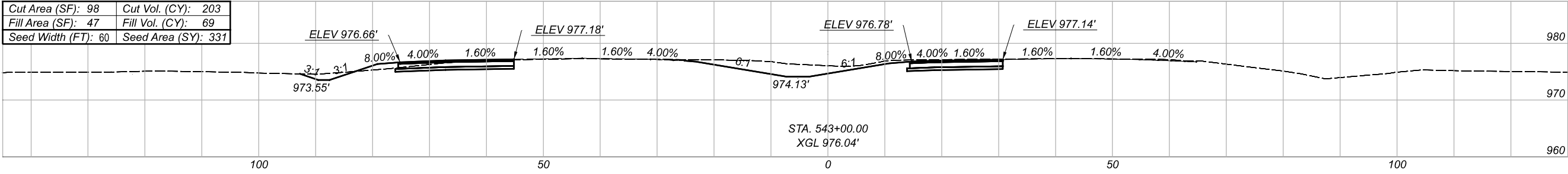
110853

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
1550	432	480	P.25	44

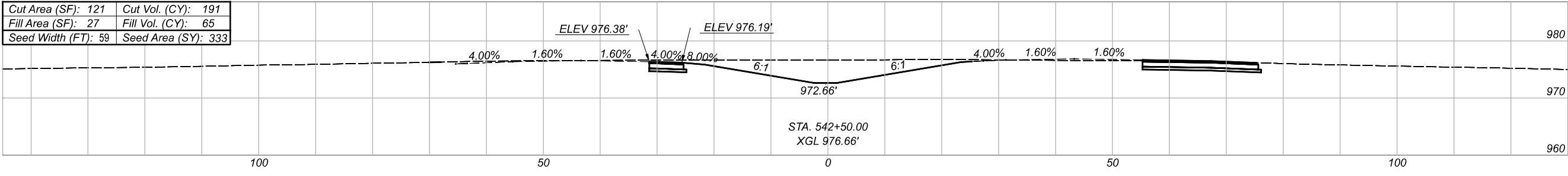
Cut Area (SF): 92	Cut Vol. (CY): 176
Fill Area (SF): 67	Fill Vol. (CY): 106
Seed Width (FT): 75	Seed Area (SY): 375



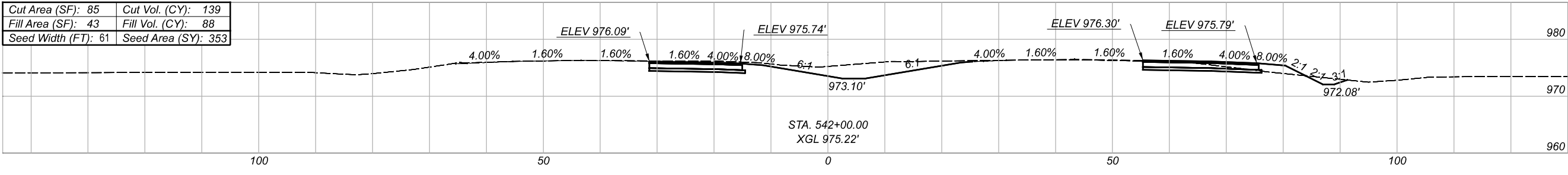
Cut Area (SF): 98	Cut Vol. (CY): 203
Fill Area (SF): 47	Fill Vol. (CY): 69
Seed Width (FT): 60	Seed Area (SY): 331



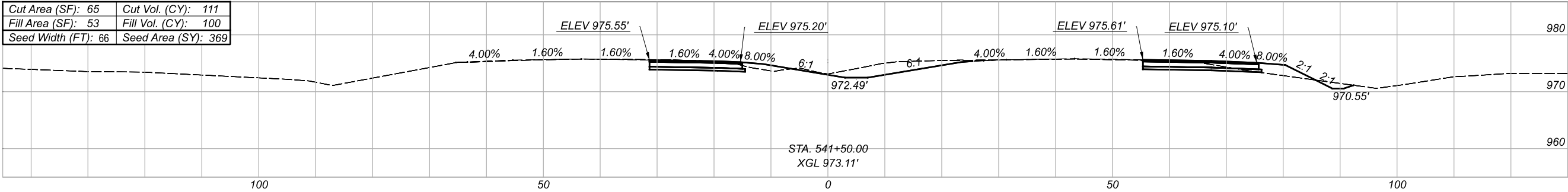
Cut Area (SF): 121	Cut Vol. (CY): 191
Fill Area (SF): 27	Fill Vol. (CY): 65
Seed Width (FT): 59	Seed Area (SY): 333



Cut Area (SF): 85	Cut Vol. (CY): 139
Fill Area (SF): 43	Fill Vol. (CY): 88
Seed Width (FT): 61	Seed Area (SY): 353



Cut Area (SF): 65	Cut Vol. (CY): 111
Fill Area (SF): 53	Fill Vol. (CY): 100
Seed Width (FT): 66	Seed Area (SY): 369



CROSS SECTIONS
STA. 541+50 TO STA. 543+50

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

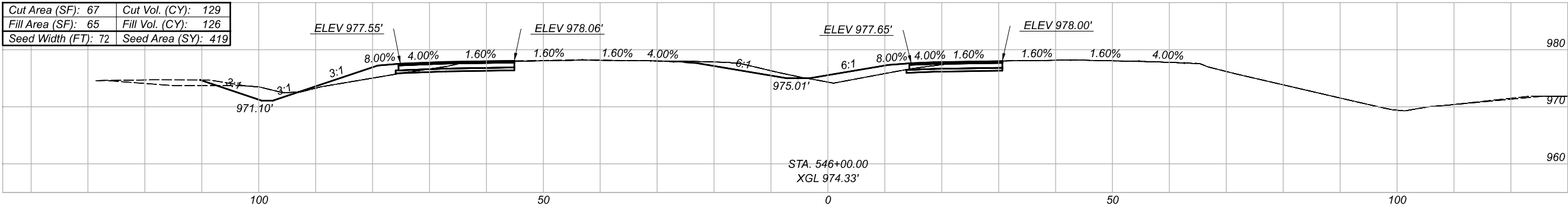
CAD 01/15/21

PROJECT ID

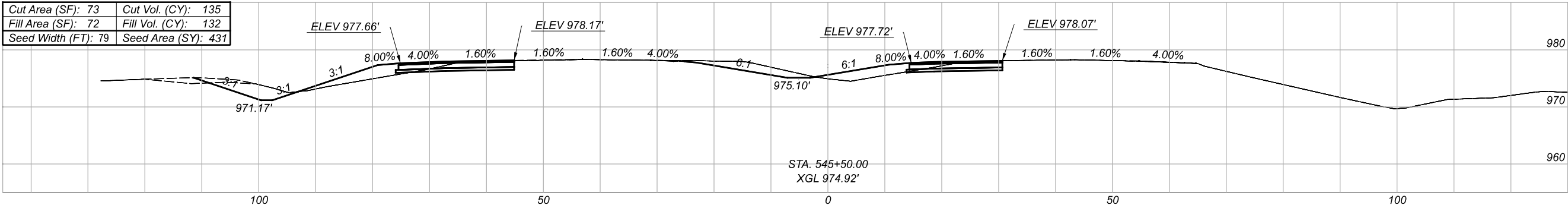
110853

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
1761	820	428	P.26	44

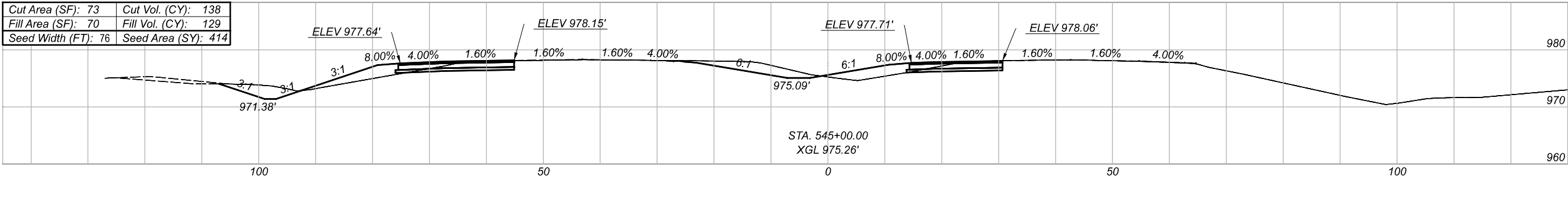
Cut Area (SF): 67	Cut Vol. (CY): 129
Fill Area (SF): 65	Fill Vol. (CY): 126
Seed Width (FT): 72	Seed Area (SY): 419



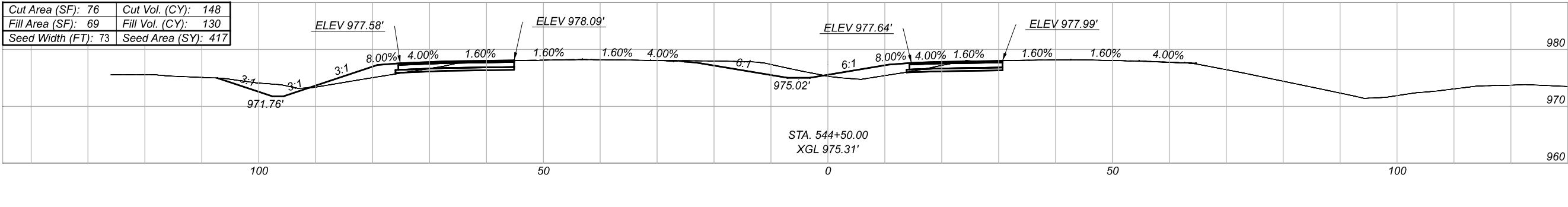
Cut Area (SF): 73	Cut Vol. (CY): 135
Fill Area (SF): 72	Fill Vol. (CY): 132
Seed Width (FT): 79	Seed Area (SY): 431



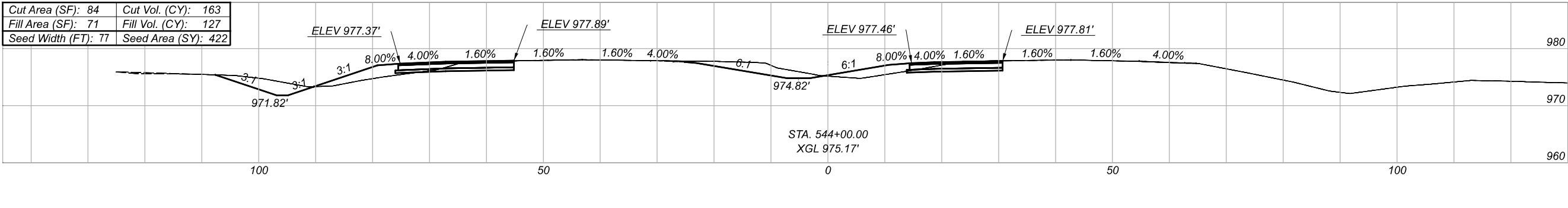
Cut Area (SF): 73	Cut Vol. (CY): 138
Fill Area (SF): 70	Fill Vol. (CY): 129
Seed Width (FT): 76	Seed Area (SY): 414



Cut Area (SF): 76	Cut Vol. (CY): 148
Fill Area (SF): 69	Fill Vol. (CY): 130
Seed Width (FT): 73	Seed Area (SY): 417



Cut Area (SF): 84	Cut Vol. (CY): 163
Fill Area (SF): 71	Fill Vol. (CY): 127
Seed Width (FT): 77	Seed Area (SY): 422



CROSS SECTIONS
STA. 544+00 TO STA. 546+00

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

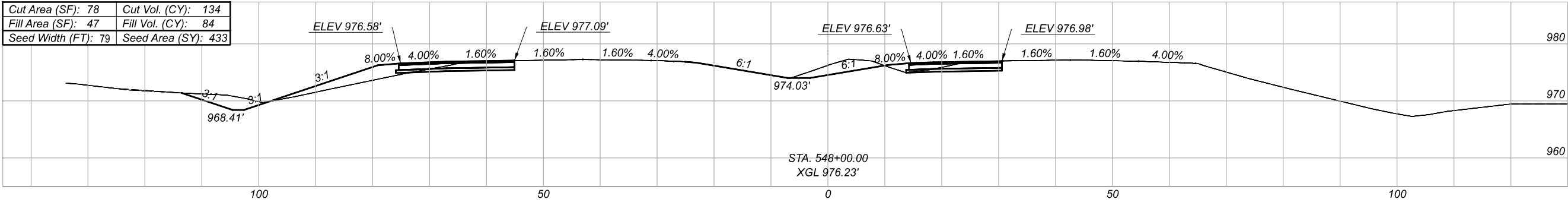
CAD 01/15/21

PROJECT ID

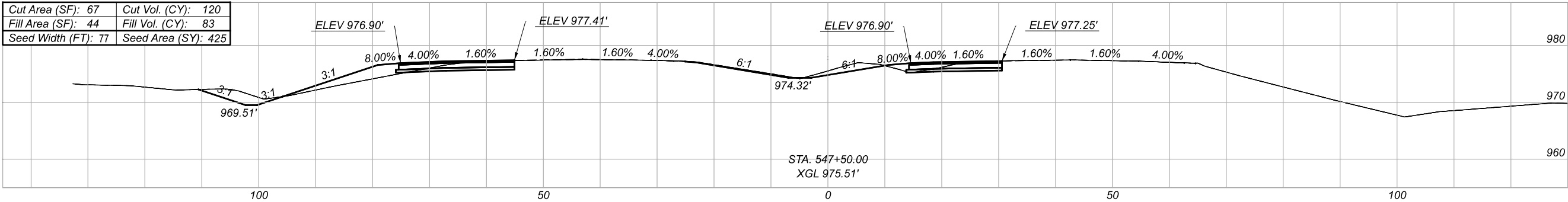
110853

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
2103	713	644	P.27	44

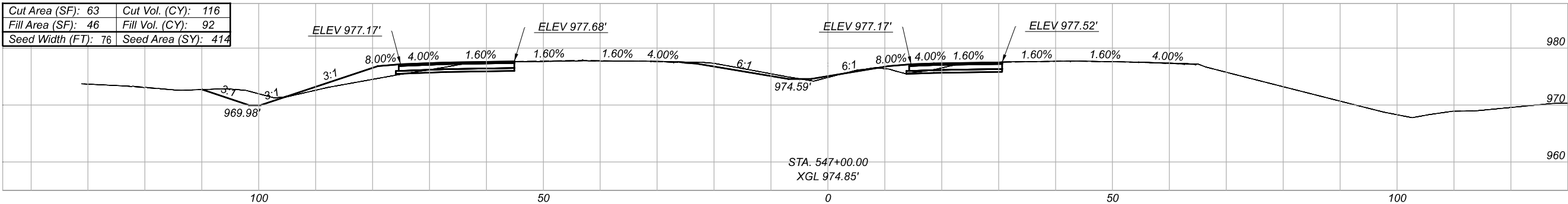
Cut Area (SF): 78	Cut Vol. (CY): 134
Fill Area (SF): 47	Fill Vol. (CY): 84
Seed Width (FT): 79	Seed Area (SY): 433



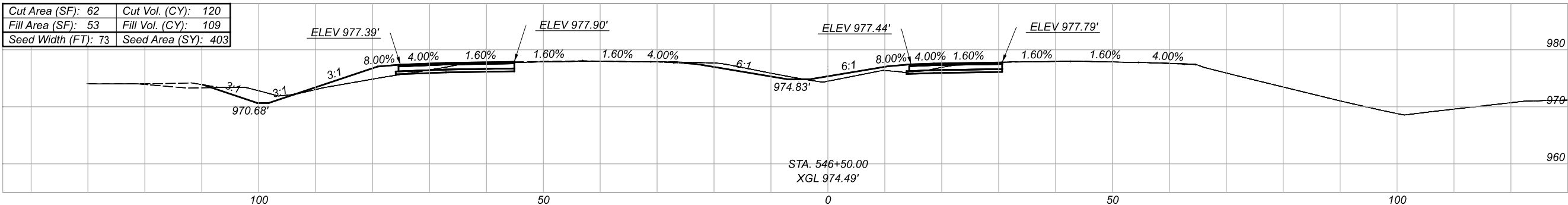
Cut Area (SF): 67	Cut Vol. (CY): 120
Fill Area (SF): 44	Fill Vol. (CY): 83
Seed Width (FT): 77	Seed Area (SY): 425



Cut Area (SF): 63	Cut Vol. (CY): 116
Fill Area (SF): 46	Fill Vol. (CY): 92
Seed Width (FT): 76	Seed Area (SY): 414



Cut Area (SF): 62	Cut Vol. (CY): 120
Fill Area (SF): 53	Fill Vol. (CY): 109
Seed Width (FT): 73	Seed Area (SY): 403



CROSS SECTIONS
STA. 546+50 TO STA. 548+00

DESIGN AGENCY



DESIGNER

MAE

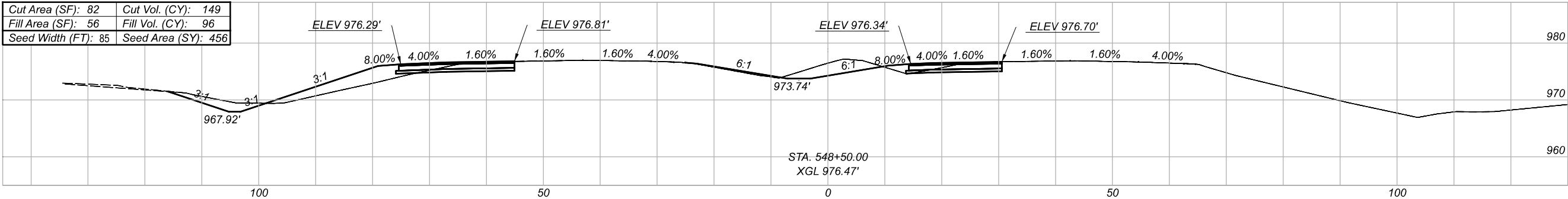
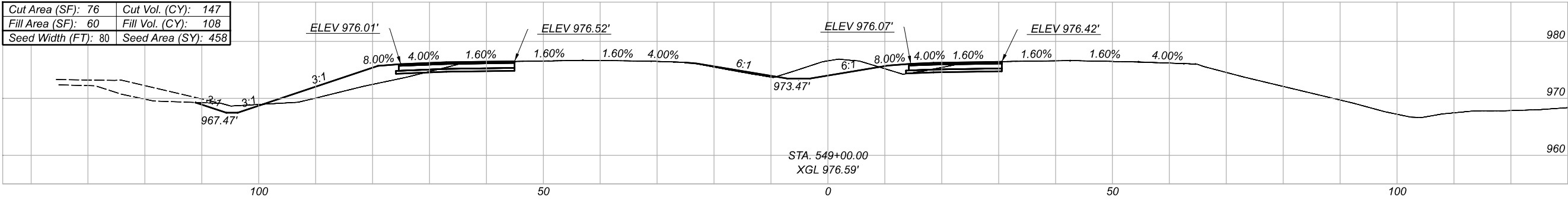
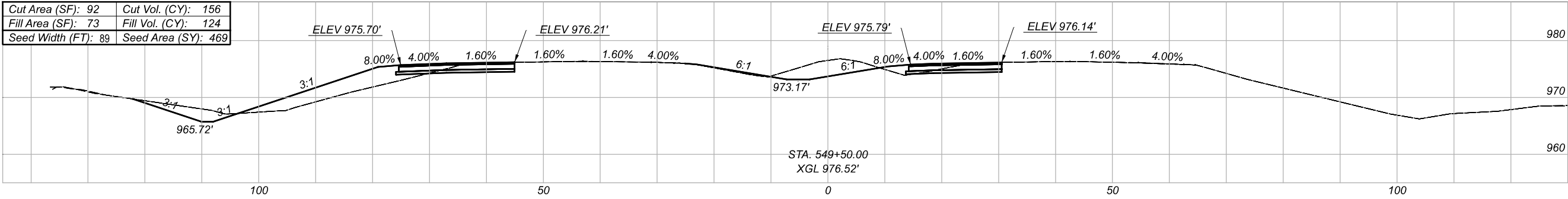
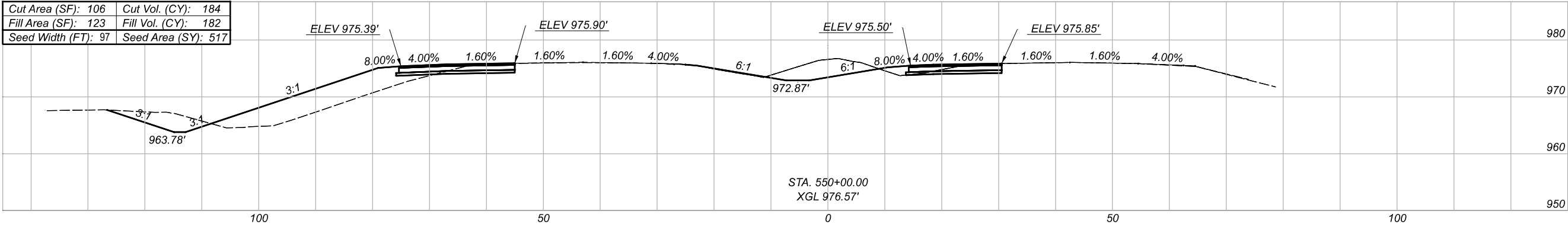
REVIEWER

CAD 01/15/21

PROJECT ID

110853

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
1675	490	368	P.28	44



CROSS SECTIONS
STA. 548+50 TO STA. 550+00

DESIGN AGENCY



DESIGNER

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REVIEWER

CAD 01/15/21

PROJECT ID

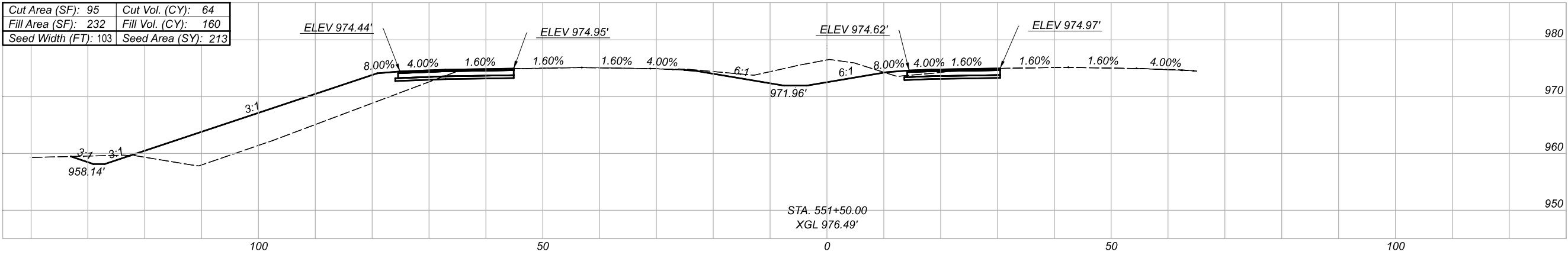
110853

Sheet Totals

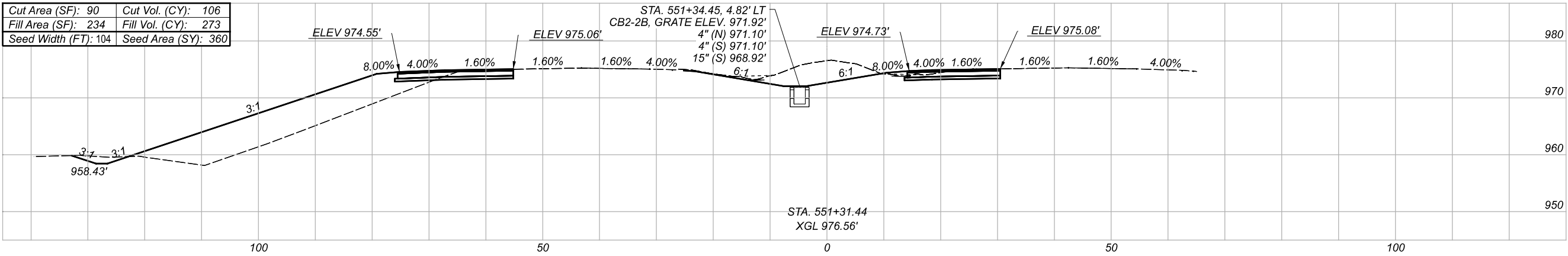
Seeding	Cut	Fill
1900	636	510

SHEET	TOTAL
P.29	44

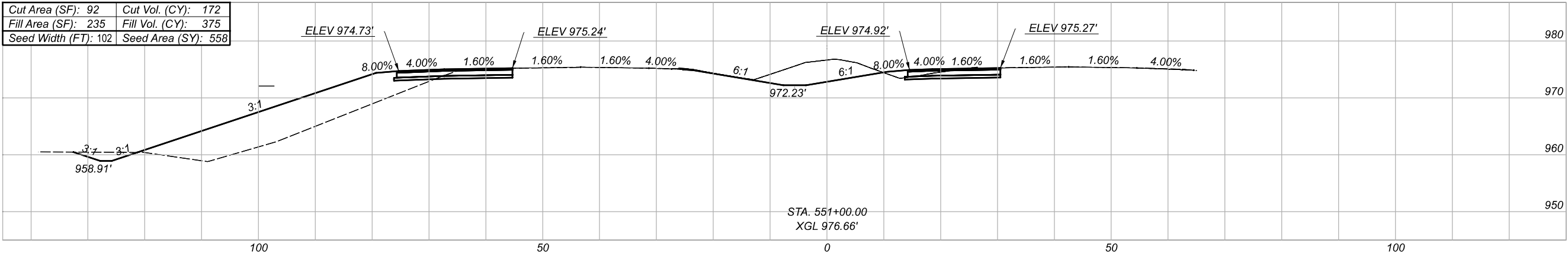
Cut Area (SF): 95	Cut Vol. (CY): 64
Fill Area (SF): 232	Fill Vol. (CY): 160
Seed Width (FT): 103	Seed Area (SY): 213



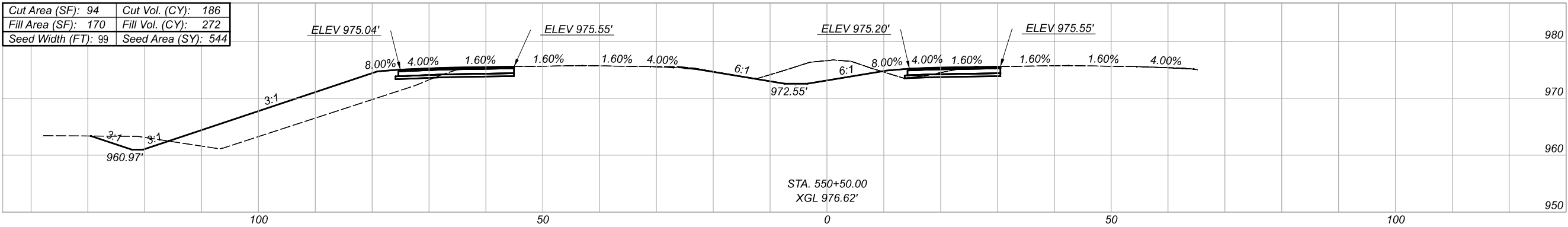
Cut Area (SF): 90	Cut Vol. (CY): 106
Fill Area (SF): 234	Fill Vol. (CY): 273
Seed Width (FT): 104	Seed Area (SY): 360



Cut Area (SF): 92	Cut Vol. (CY): 172
Fill Area (SF): 235	Fill Vol. (CY): 375
Seed Width (FT): 102	Seed Area (SY): 558



Cut Area (SF): 94	Cut Vol. (CY): 186
Fill Area (SF): 170	Fill Vol. (CY): 272
Seed Width (FT): 99	Seed Area (SY): 544



CROSS SECTIONS
STA. 550+50 TO STA. 551+50

DESIGN AGENCY



DESIGNER

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REVIEWER

CAD 01/15/21

PROJECT ID

110853

Sheet Totals

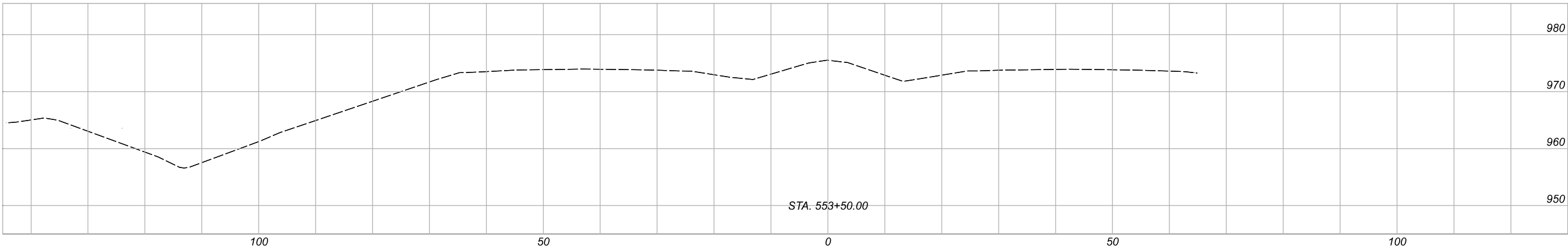
Seeding	Cut	Fill
1676	528	1080

SHEET

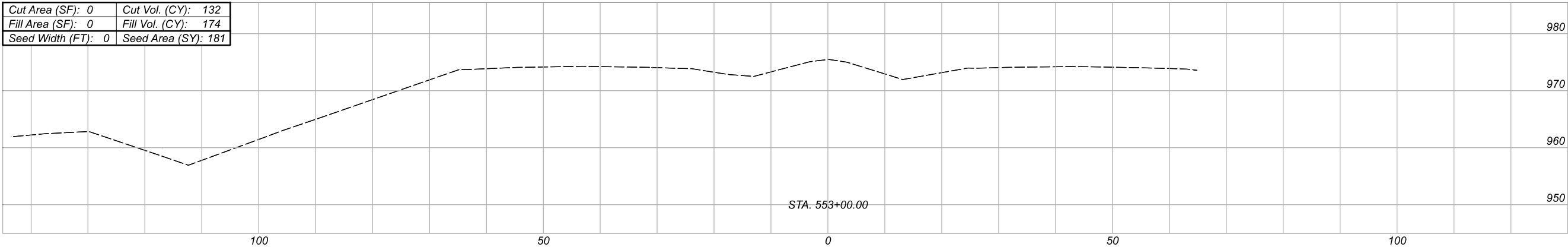
P.30

TOTAL

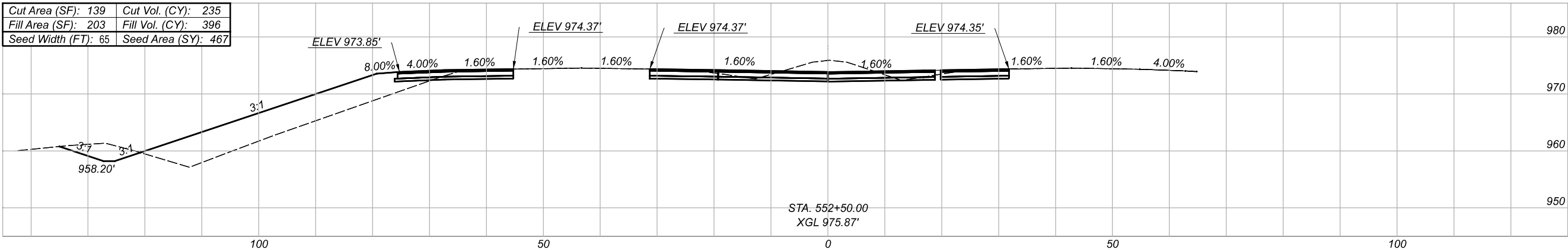
44



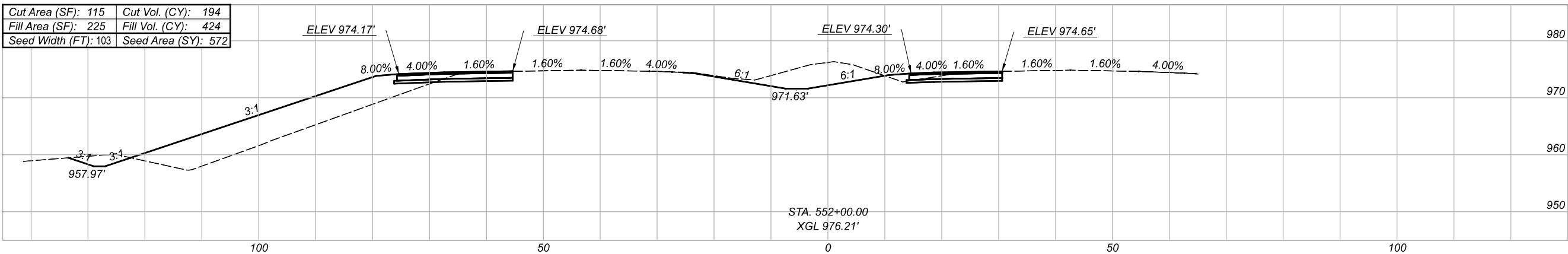
Cut Area (SF): 0	Cut Vol. (CY): 132
Fill Area (SF): 0	Fill Vol. (CY): 174
Seed Width (FT): 0	Seed Area (SY): 181



Cut Area (SF): 139	Cut Vol. (CY): 235
Fill Area (SF): 203	Fill Vol. (CY): 396
Seed Width (FT): 65	Seed Area (SY): 467



Cut Area (SF): 115	Cut Vol. (CY): 194
Fill Area (SF): 225	Fill Vol. (CY): 424
Seed Width (FT): 103	Seed Area (SY): 572



CROSS SECTIONS
STA. 552+00 TO STA. 553+50

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

CAD 01/15/21

PROJECT ID

110853

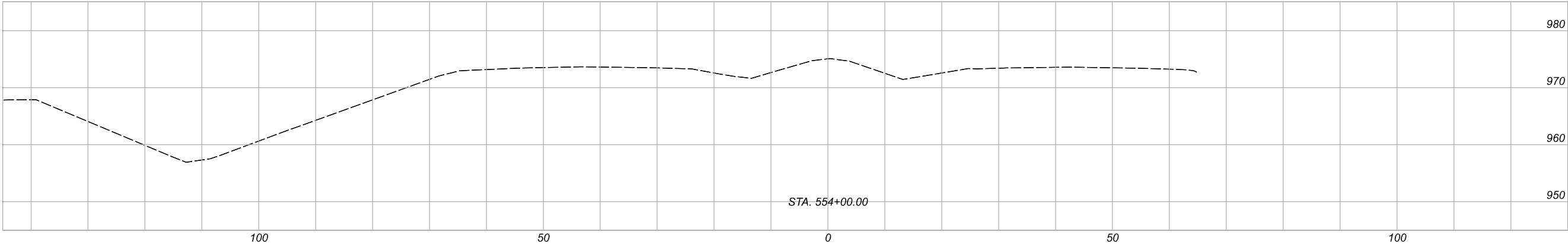
Sheet Totals		
Seeding	Cut	Fill
1219	561	994

SHEET

P.31

TOTAL

44



STA. 554+00.00

Sheet Totals		
Seeding	Cut	Fill
.	.	.

SHEET	TOTAL
P.32	44

DESIGN AGENCY



DESIGNER

MAE

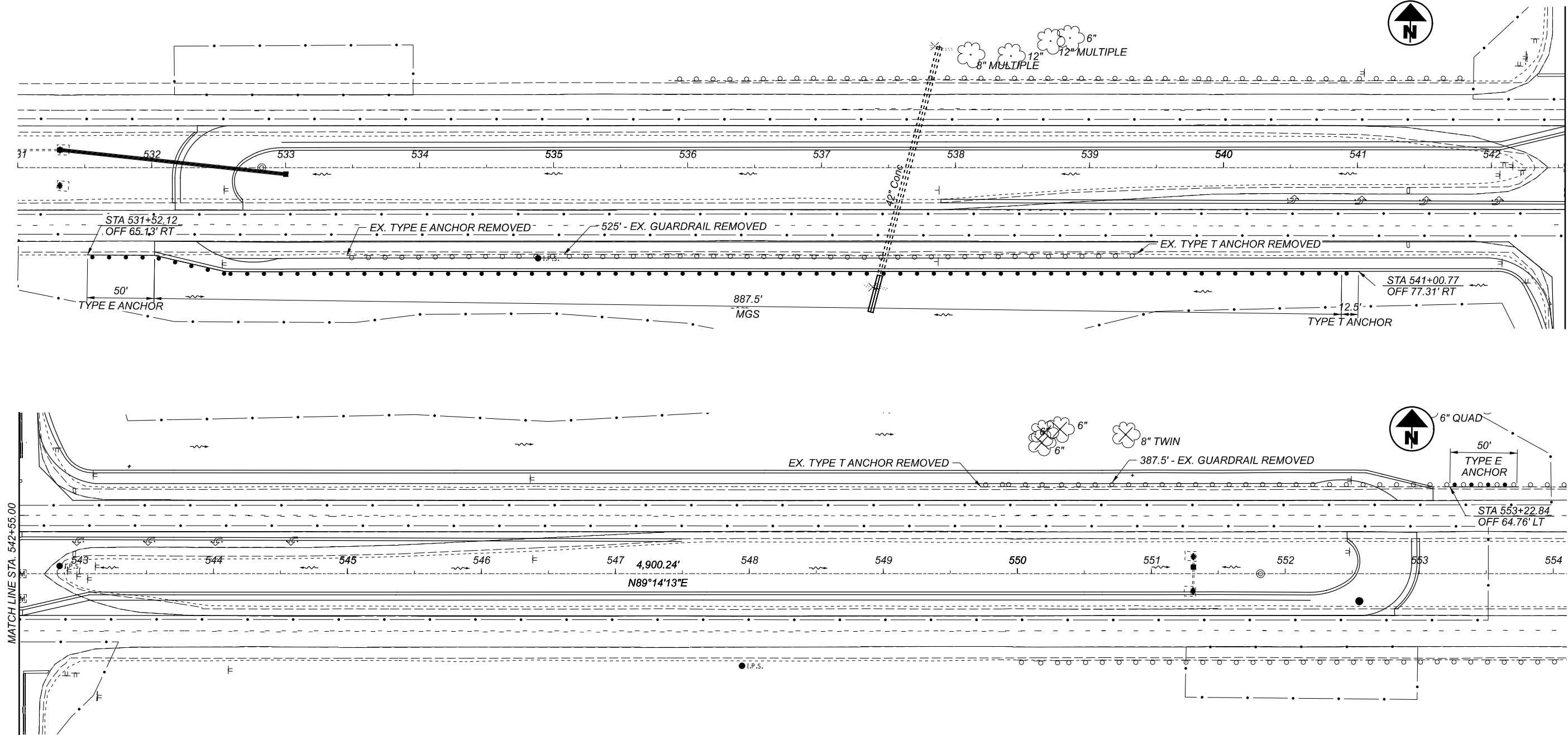
REVIEWER

CAD 01/15/21

PROJECT ID

110853

CROSS SECTIONS
STA. 554+00



ITEM	QUANTITY	UNIT	DESCRIPTION
202	912.5	FT	GUARDRAIL REMOVED
202	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E
202	2	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T
606	887.5	FT	GUARDRAIL, TYPE MGS
606	2	EACH	ANCHOR ASSEMBLY, MGS TYPE E
606	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T

ALL QUANTITIES CARRIED TO THE GENERAL SUMMARY.

HORIZONTAL
SCALE IN FEET

0

20

40

80

GUARDRAIL DETAILS

US 30 & SR 89

DESIGN AGENCY

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

DESIGNER

MAE

REVIEWER

CAD 01/15/21

PROJECT ID

110853

SHEET

P.33

TOTAL

44

REF. NO.	STATION		202	202	202	202	605	605	605	611	611	611	611	611	611	611	611	611	602
			PIPE REMOVED, 24" AND UNDER	PIPE REMOVED, OVER 24"	CATCH BASIN REMOVED	HEADWALL REMOVED	4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (12" DEEP)	4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (18" DEEP)	4" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (24" DEEP)	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	4" CONDUIT, TYPE C	6" CONDUIT, TYPE C	15" CONDUIT, TYPE B	15" CONDUIT, TYPE C	42" CONDUIT, TYPE C, 706.02	CATCH BASIN, NO. 2-2B	PRECAST REINFORCED CONCRETE OUTLET	CONCRETE MASONRY
	BEGIN	END	FT	FT	EACH	EACH	FT	FT	FT	FT	SY	FT	FT	FT	FT	FT	EACH	EACH	CY
CB1	531+31.48				1												1		
CB2	533+00.00																1		
CB3	551+31.45				2												1		
P1	531+31.48		10													10			
P2	531+31.48		10													10			
P3	531+31.48		10													10			
P4	531+31.48		10										10						
P5	531+31.48	533+00.00												169					
P6	537+36.51			10		1										28			1
P7	551+31.45		10									18							
P8	551+31.45		36												28				
P9	551+31.45		10									28							
U1	533+00.00	542+57.00					957												
U2	533+00.00									19									
U3	533+00.00									23	4							1	
U4	532+02.12	542+46.65						1072											
U5	532+02.12	542+46.65							1072										
U6	537+00.00									17								1	
U7	538+00.00									22	11							1	
U8	542+57.00	552+19.00					962												
U9	542+67.70	553+10.36							1095										
U10	542+67.70	553+10.36						1095											
U11	548+07.15									18								1	
U12	548+10.28									15	9							1	
U13	551+31.45									28									
U14	552+60.46									23	16							1	
TOTALS CARRIED TO GENERAL SUMMARY			96	10	3	1	4086		2167	165	39	46	10	169	58	28	3	6	1

DRAINAGE SUBSUMMARY

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

CAD 01/15/21

PROJECT ID

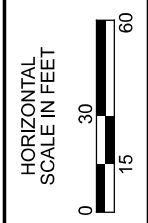
110853

SHEET

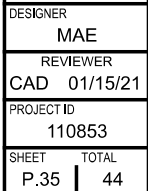
P.34

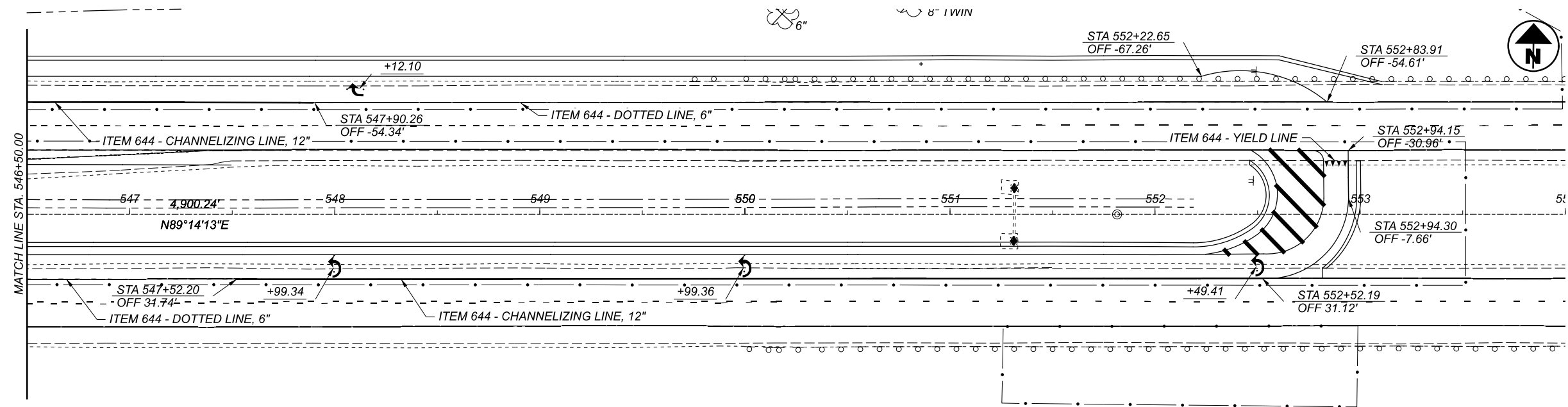
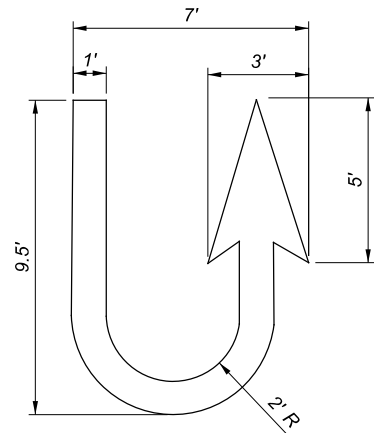
TOTAL

44



DESIGN AGENCY






ITEM	QUANTITY	UNIT	DESCRIPTION
621	52	EACH	RPM
621	12	EACH	RAISED PAVEMENT MARKER REMOVED
644	1.07	MILE	EDGE LINE, 6"
644	1988	FT	DOTTED LINE, 6"
644	2000	FT	CHANNELIZING LINE, 12"
644	258	FT	TRANSVERSE/DIAGONAL LINE
644	24	FT	YIELD LINE
644	10	EACH	LANE ARROW
644	6	EACH	LANE ARROW, AS PER PLAN
644	2	EACH	WORD ON PAVEMENT, 96"
644	1160	FT	REMOVAL OF PAVEMENT MARKING



SHEET NO.	BEGIN REF. NO.	End Ref. No.	Station Range		625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	632	633	
					CONNECTION, FUSED PULL APART	CONNECTION, UNFUSED PERMANENT	LIGHT POLE, CONVENTIONAL, AT18B40	LIGHT POLE FOUNDATION, 24" X 8' DEEP	NO. 6 AWG 2400 VOLT DISTRIBUTION CABLE	1-1/2" DUCT CABLE WITH THREE NO. 6 AWG 2400 VOLT CABLES	NO. 10 AWG POLE AND BRACKET CABLE	CONDUIT, 3" , 725.04	CONDUIT, JACKED OR DRILLED, 3" , 725.04	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED)	TRENCH	PULL BOX, 725.08, 18"	PULL BOX, 725.08, 24"	GROUND ROD	POWER SERVICE, AS PER PLAN	UNDERGROUND WARNING/MARKING TAPE	ARC FLASH CALCULATIONS AND LABEL	CONDUIT RISER, 2" DIAMETER	CONTROLLER WORK PAD
			BEGIN	END	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
	1	2	532+33.22	532+51.22	2		1	1		26	174			1	16			1		16			
	2	3	532+51.22	533+83.00	2		1	1		140	174			1	130			1		130			
	2	4	532+51.22	532+49.16		3			486				152				1						
	5	4	532+16.93	532+49.16	2		1	1		40	174			1	30			1		30			
	4	6	532+49.16	533+66.05		3				124					114		1			114			
	6	7	533+66.05	537+78.02	2		1	1		419	174			1	409			1		409			
	7	8	537+78.02	541+89.04		3				418					408	1				408			
	8	9	541+89.04	542+22.04						49					39					39			
	9	10	542+22.04	542+22.85	2		1	1		16	174			1	6			1		6			
	9	11	542+22.04	542+83.23		3			204				58				1						
	11	12	542+83.23	543+09.76	2	3	1	1		45	174			1	35	1		1		35			
	8	13	541+89.04	541+91.04		3			474				148				1						
	13	14	541+91.04	542+06.00		3				30					20	1				20			
	14	15	542+06.00	542+28.24	2		1	1		52	174			1	42			1		42			
	15	16	542+28.24	542+92.24		3			222				64			1							
	16	18	542+92.24	543+20.23					240			30			30			1	1	30	1	1	
	16	17	542+92.24	542+92.31	2		1	1		15	174			1	5			1		5			
	16	19	542+92.24	547+32.44		3				465					455		1			455			
	19	20	547+32.44	551+45.02		3				420					410	1				410			
	20	21	551+45.02	552+75.93	2		1	1		139	174			1	129			1		129			
	21	22	552+75.93	552+95.36	2		1	1		27	174			1	17			1		17			
	21	23	552+75.93	552+73.70		3			486				152				1						
	23	24	552+73.70	551+35.00	2		1	1		146	174			1	136			1		136			
	23	25	552+73.70	552+85.33	2	3	1	1		20	174			1	10		1	1		10			
TOTALS CARRIED TO GENERAL SUMMARY:					24	36	12	12	2112	2591	2088	30	574	12	2441	5	7	13	1	2441	1	1	1

LIGHTING SUBSUMMARY

DESIGN AGENCY



DESIGNER

MAE

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CAD 01/15/21

PROJECT ID

110853

SHEET

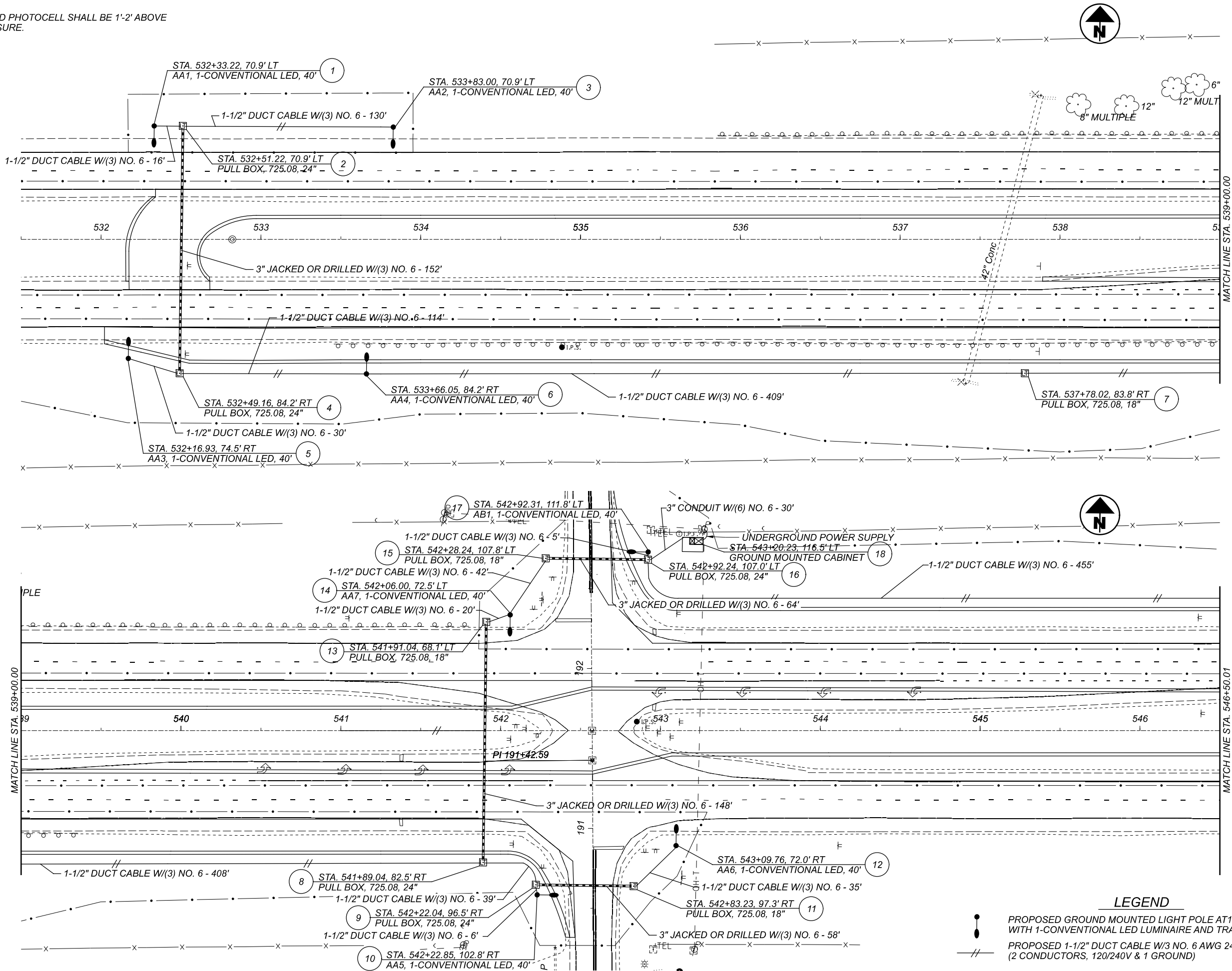
P.37

TOTAL

44

NOTES:

SCD HL-40.20, PROPOSED PHOTOCELL SHALL BE 1'-2" ABOVE THE PROPOSED ENCLOSURE.



LEGEND

- PROPOSED GROUND MOUNTED LIGHT POLE AT18B40, PER HL-10.11 WITH 1-CONVENTIONAL LED LUMINAIRE AND TRANSFORMER BASE
- PROPOSED 1-1/2" DUCT CABLE W/3 NO. 6 AWG 2400V CABLES (2 CONDUCTORS, 120/240V & 1 GROUND)
- PROPOSED 3" JACKED OR DRILLED CONDUIT W/ LIGHTING CABLES

HORIZONTAL SCALE IN FEET

0 15 30 60

LIGHTING DETAILS
US 30 & SR 89

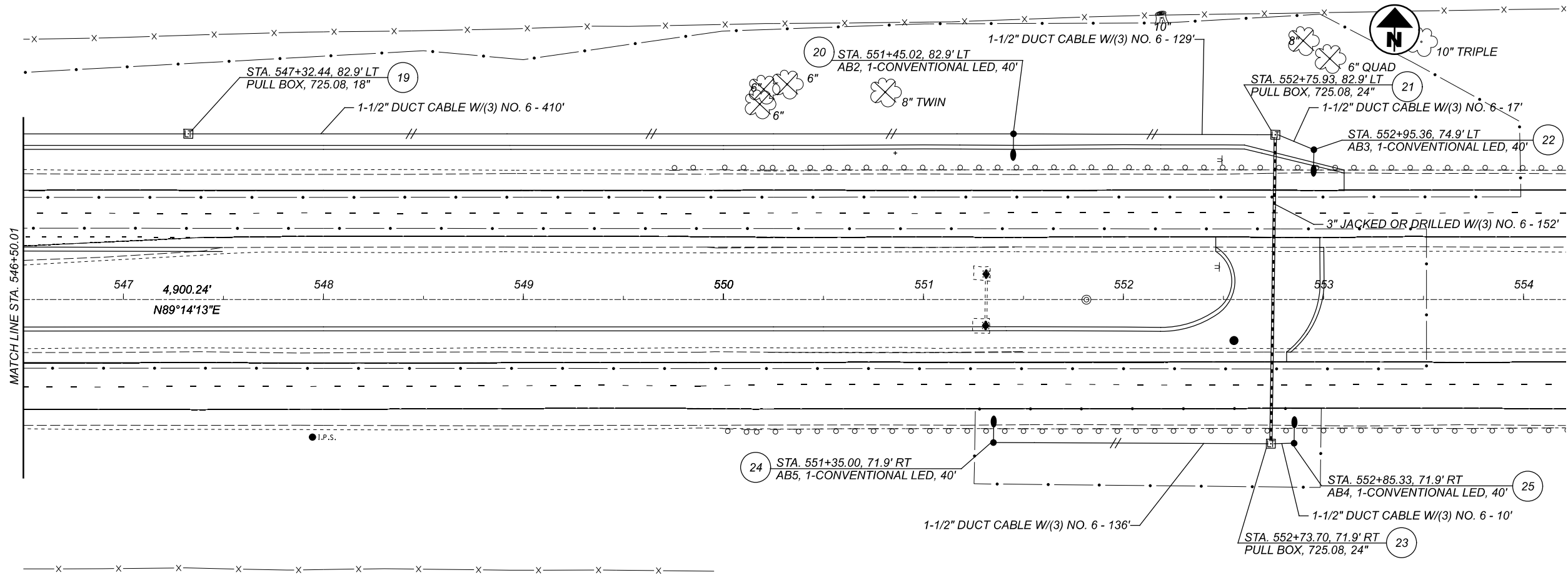
DESIGN AGENCY

DESIGNER
MAE

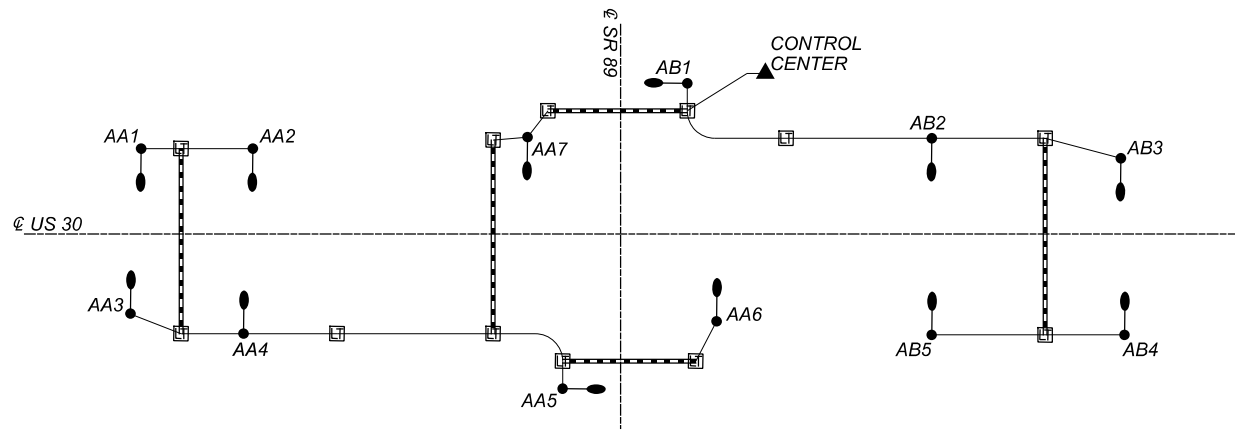
REVIEWER
CAD 01/15/21

PROJECT ID
110853

SHEET TOTAL
P.38 44



CIRCUIT SCHEMATIC



CONTROL CENTER DATA

CONTROL CENTER DESIGNATION	LINE VOLTS	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CONDUCTOR SIZE - AWG	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT LOAD AMPS	CIRCUIT FUSE SIZE AMPS	CIRCUIT CABLE SIZE AWG	MAINTAINING AGENCY
LCC	120	1.1	As per Ohio Edison or NEC Article 310	60	A	5.25	10	6	ODOT
					B	3.75	10	6	
					-	-	-	-	

HORIZONTAL SCALE IN FEET
0 15 30 60

LIGHTING DETAILS
US 30 & SR 89

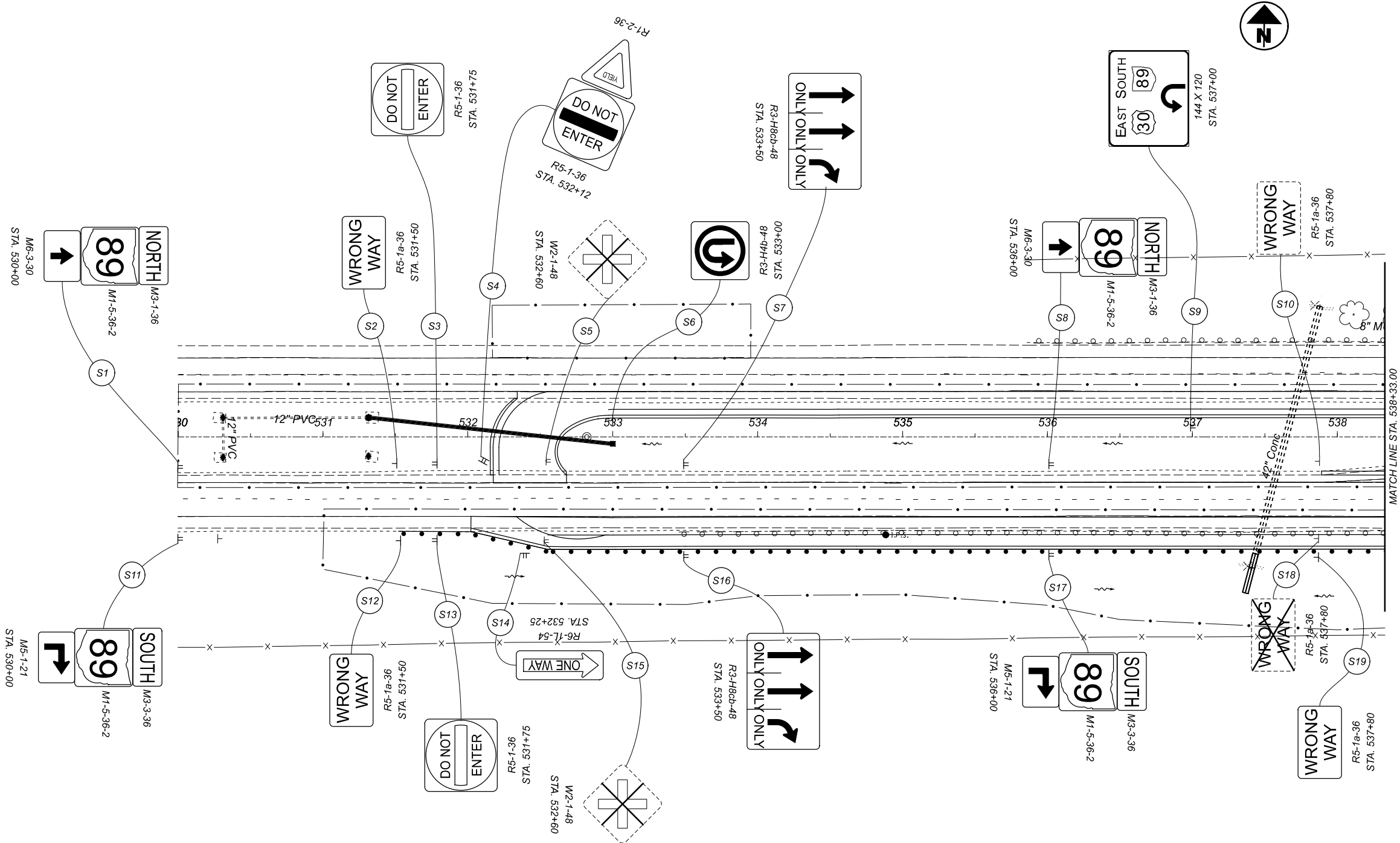
DESIGN AGENCY

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SHEET TOTAL
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SIGNING DETAILS
US 30 & SR 89

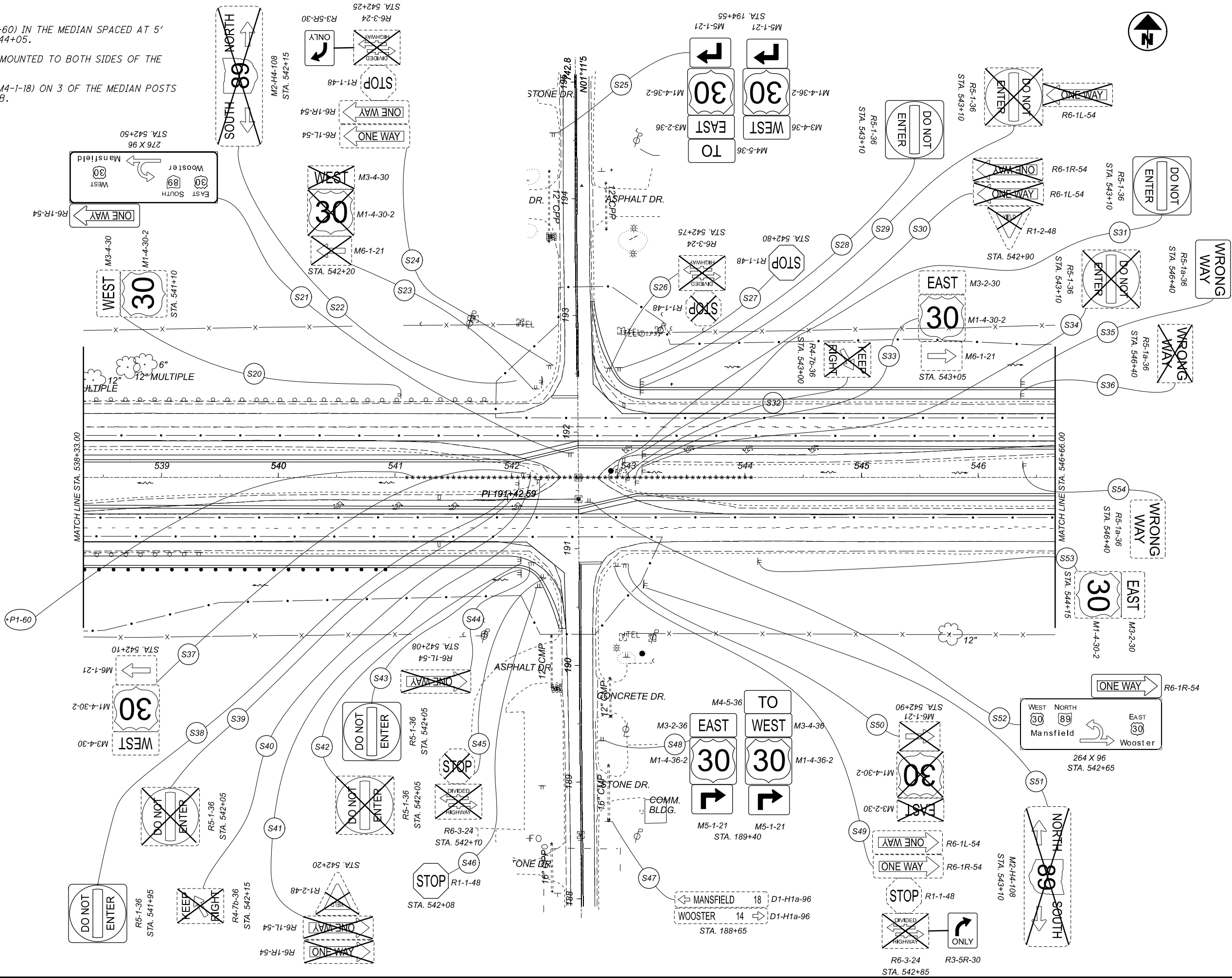
DESIGN AGENCY



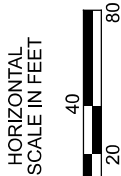
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REVIEWER	CAD 01/15/21
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SHEET	P.40
TOTAL	44

NOTES:

- INSTALL 60 NO. 3 POSTS (PI-60) IN THE MEDIAN SPACED AT 5' FROM STA. 541+10 TO STA. 544+05.
- POST REFLECTORS SHALL BE MOUNTED TO BOTH SIDES OF THE MEDIAN POSTS (PI-60).
- INSTALL OBJECT MARKERS (OM4-I-18) ON 3 OF THE MEDIAN POSTS FOR EACH APPROACH, NB & SB.



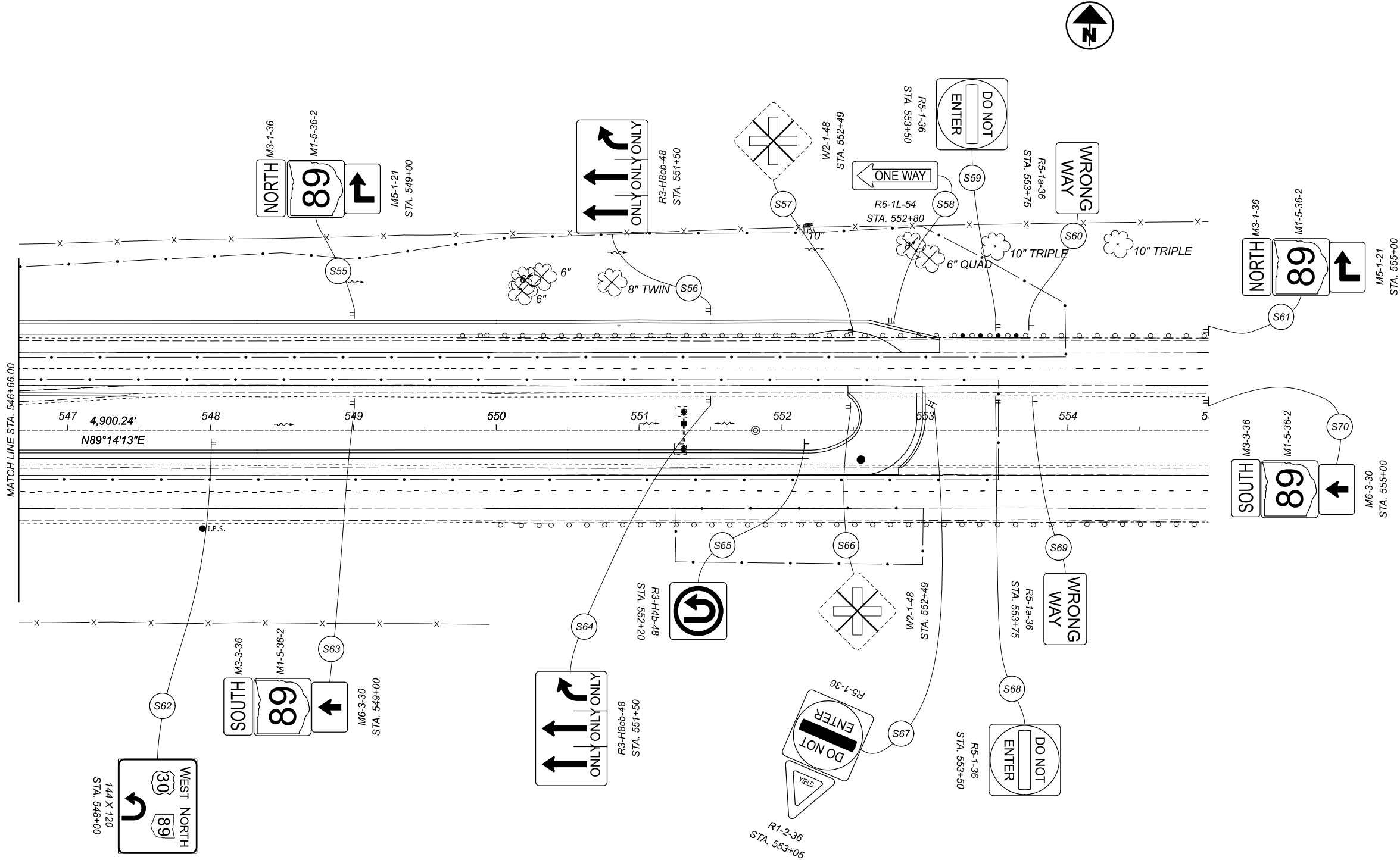
SIGNING DETAILS
US 30 & SR 89



DESIGN AGENCY



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REVIEWER	CAD 01/15/21
PROJECT ID	110853
SHEET	TOTAL
P.41	44



SIGNING DETAILS
US 30 & SR 89

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SHEET

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TOTAL

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HORIZONTAL
SCALE IN FEET



Plan Sheet Ref. No.	Sign Number	Station	Code Number	Sign Size (In.)	630																			
					SIGN		Removal of Ground Mounted Support	Removal of Ground Mounted Sign and Disposal		Ground Mounted Supports				Breakaway Structural Beam Connection	Ground Mounted Structural Beam Support Foundation	Sign Post Reflector	Sign Backing Assembly							
					Flat Sheet	Ground Mounted Extrusheet																		
																		Post	MInor	Major	No. 3	Post	W10 x 22 Beam	W10 x 12 Beam
SIZE	SQ FT	Each			FT			EACH																
40	S1	530+00	M3-1-36	36 x 18	5						18	18												
			M1-5-36-2	36 x 36	9																			
			M6-3-30	30 x 21	4																			
40	S2	531+50	R5-1a-36	36 x 24	6						14						1							
40	S3	531+75	R5-1-36	36 x 36	9						15	15					2							
40	S4	532+12	R1-2-36	36 x 36	9						15	15					2							
			R5-1-36	36 x 36	9																			
40	S5	532+60	W2-1-48	48 x 48			2		1															
40	S6	533+00	R3-H4b-48	48 x 48	16						16	16												
40	S7	533+50	R3-H8cb-48	48 x 30	10						15	15												
40	S8	536+00	M3-1-36	36 x 18	5						18	18												
			M1-5-36-2	36 x 36	9																			
			M6-3-30	30 x 21	4																			
40	S9	537+00	N/A	144 x 120		120							23	23	2	2								
40	S10	537+80	R5-1a-36	36 x 24																				
40	S11	530+00	M3-3-36	36 x 18	5						18	18												
			M1-5-36-2	36 x 36	9																			
			M5-1-21	21 x 15	2																			
40	S12	531+50	R5-1a-36	36 x 24	6						14						1							
40	S13	531+75	R5-1-36	36 x 36	9						15	15					2							
40	S14	532+25	R6-1L-54	54 x 18	7						14	14												
40	S15	532+60	W2-1-48	48 x 48			2		1															
40	S16	533+50	R3-H8cb-48	48 x 30	10						15	15												
40	S17	536+00	M3-3-36	36 x 18	5						18	18												
			M1-5-36-2	36 x 36	9																			
			M5-1-21	21 x 15	2																			
40	S18	537+80	R5-1a-36	36 x 24			1		1															
40	S19	537+80	R5-1a-36	36 x 24	6						14						1							
41	S20	541+10	M3-4-30	30 x 12																				
			M1-4-30-2	30 x 30																				
41	S21	542+50	R6-1R-54	54 x 18	7												2							
			N/A	276 x 96		184							22	22		2								
41	S22	542+15	M2-H4-108	108 x 30			2		1															
41	S23	542+20	M3-4-30	30 x 12			2		1															
			M1-4-30-2	30 x 30					1															
			M6-1-21	21 x 15					1															
41	S24	542+25	R6-1L-54	54 x 18																				
			R6-1R-54	54 x 18																				
			R1-1-48	48 x 48																				
			R6-3-24	24 x 18					1															
			R3-5R-30	30 x 36	8																			
41	S25	194+55	M3-4-36	36 x 18	5						18	18												
			M1-4-36-2	36 x 36	9																			
			M5-1-21	21 x 15	2																			
			M4-5-36	36 x 18	5						19	19												
			M3-2-36	36 x 18	5																			
			M1-4-36-2	36 x 36	9																			
			M5-1-21	21 x 15	2																			
41	S26	542+75	R1-1-48	48 x 48			2		1															
			R6-3-24	24 x 18					1															
41	S27	542+80	R1-1-48	48 x 48	16						16	16					2							
41	S28	543+10	R5-1-36	36 x 36	9						15	15					2							
41	S29	543+10	R6-1L-54	54 x 18			2		1															
			R5-1-36	36 x 36					1															
41	S30	542+90	R6-1R-54	54 x 18			2		1															
			R6-1L-54	54 x 18					1															
			R1-2-48	48 x 48					1															
41	S31	543+10	R5-1-36	36 x 36	9						15	15					2							
41	S32	543+00	R4-7b-36	36 x 48			2		1															
41	S33	543+05	M3-2-30	30 x 12																				
			M1-4-30-2	30 x 30																				
			M6-1-21	21 x 15																				
41	S34	543+10	R5-1-36	36 x 36			2		1															
41	S35	546+40	R5-1a-36	36 x 24		6					14	14					2							
41	S36	546+40	R5-1a-36	36 x 24			2		1															
41	S37	542+10	M3-4-30	30 x 12																				
			M1-4-30-2	30 x 30																				
			M6-1-21	21 x 15																				
41	S38	541+95	R5-1-36	36 x 36	9						15	15					2							
41	S39	542+05	R5-1-36	36 x 36			2		1															
41	S40	542+15	R4-7b-36	36 x 48			2		1															
SUBTOTALS					263	304	25	20			617	44	46	4	4	19	2							

Plan Sheet Ref. No.	Sign Number	Station	Code Number	Sign Size (In.)	630												
					SIGN		Removal of Ground Mounted Support	Removal of Ground Mounted Sign and Disposal		Ground Mounted Supports				Breakaway Structural Beam Connection	Ground Mounted Structural Beam Support Foundation	Sign Post Reflector	Sign Backing Assembly
					Flat Sheet	Ground Mounted Extrusheet											
				SIZE	SQ FT	Each			FT				EACH				
41	S41	542+20	R6-1R-54	54 x 18			2	1									
			R6-1L-54	54 x 18				1									
			R1-2-48	48 x 48				1									
41	S42	542+05	R5-1-36	36 x 36			2	1									
41	S43	542+05	R5-1-36	36 x 36	9						15	15				2	
41	S44	542+08	R6-1L-54	54 x 18			2	1									
41	S45	542+10	R1-1-48	48 x 48			2	1									
			R6-3-24	24 x 18													
41	S46	542+08	R1-1-48	48 x 48	16						16	16				2	
41	S47	188+65	D1-H1a-72	72 x 12													
			D1-H1a-72	72 x 12													
41	S48	189+40	M3-2-36	36 x 18	5						18	18					
			M1-4-36-2	36 x 36	9												
			M5-1-21	21 x 15	2												
			M4-5-36	36 x 18	5						19	19					
			M3-4-36	36 x 18	5												
			M1-4-36-2	36 x 36	9												
			M5-1-21	21 x 15	2												
41	S49	542+85	R6-1L-54	54 x 18													
			R6-1R-54	54 x 18													
			R1-1-48	48 x 48													
			R6-3-24	24 x 18				1									
			R3-5R-30	30 x 36	8												
41	S50	542+90	M3-2-30	30 x 18			2	1									
			M1-4-30-2	30 x 30				1									
			M6-1-21	21 x 15				1									
41	S51	543+10	M2-H4-108	108 x 30			2	1									
41	S52	542+65	R6-1R-54	54 x 18	7												2
			N/A	264 x 96		176						22	22		2	2	
41	S53	544+15	M3-2-30	30 x 18													
			M1-4-30-2	30 x 30													
41	S54	546+40	R5-1a-36	36 x 24													
42	S55	549+00	M3-1-36	36 x 18	5						18	18					
			M1-5-36-2	36 x 36	9												
			M5-1-21	21 x 15	2												
42	S56	551+50	R3-H8cb-48	48 x 30	10						15	15					
42	S57	552+49	W2-1-48	48 x 48			2	1									
42	S58	552+80	R6-1L-54	54 x 18	7						14	14					
42	S59	553+50	R5-1-36	36 x 36	9						15	15				2	
42	S60	553+75	R5-1a-36	36 x 24	6						14	14				2	
42	S61	555+00	M3-1-36	36 x 18	5						18	18					
			M1-5-36-2	36 x 36	9												
			M5-1-21	21 x 15	2												
42	S62	548+00	N/A	144 x 120		120								23	23	2	2
42	S63	549+00	M3-3-36	36 x 18	5						18	18					
			M1-5-36-2	36 x 36	9												
			M6-3-30	30 x 21	4												
42	S64	551+50	R3-H8cb-48	48 x 30	10						15	15					
42	S65	552+20	R3-H4b-48	48 x 48	16						16	16					
42	S66	552+49	W2-1-48	48 x 48			2	1									
42	S67	553+05	R5-1-36	36 x 36	9						15	15				2	
			R1-2-36	36 x 36	9												
42	S68	553+50	R5-1-36	36 x 36	9						15	15				2	
42	S69	553+75	R5-1a-36	36 x 24	6						14					1	
42	S70	555+00	M3-3-36	36 x 18	5						18	18					
			M1-5-36-2	36 x 36	9												
			M6-3-30	30 x 21	4												
41	P1-60	541+10	OM4-1-18	18 x 18	2						720					120	
			OM4-1-18	18 x 18	2												
			OM4-1-18	18 x 18	2												
			OM4-1-18	18 x 18	2												
			OM4-1-18	18 x 18	2												
			OM4-1-18	18 x 18	2												
																</	

PROJECT: ASD-030-10.28											PID: 110853											
Import Units:		Ground Coord?	TRUE	Unit Conversion Factor1 (sft->m):		0.304800610	Unitless Ground to Grid Factor: 0.999910578		Unitless Factor:													
		U.S. Survey FT	sft	Unit Conversion Factor2 (sft->sft):		1.000000000			Primary Project Control: TRIMBLE R-6													
Output Unit1:		Meters	m	Adjustment Factor1:		0.304773354																
Output Unit2:		U.S. Survey FT	sft	Adjustment Factor2:		0.999910578																
GROUND COORDINATES - U.S. Survey FT											STATE PLANE GRID COORDINATES						MONUMENTS TO BE SET					
PROJECT coordinates are scaled from GRID coordinates about the Ohio North Zone grid point N=0, E=0 (N 39° 27' 01.76097", W 89° 28' 32.98476")											Horiz. Datum:		NAD83 (2011)		Ohio State Plane, North Zone		Vert. Datum:		NAVD88		DURING CONSTRUCTION	
											defined by GPS from CORS using NAVD88. All other elevations are established by leveling from .										ITEM 623.05	ITEM 623.05
NAME	Alignment Name	STATION	OFFSET (sft)	RT/LT	NORTH (sft)	EAST (sft)	ELEVATION (sft)	FEATURE	POINT TYPE	DESCRIPTION	NAME	NORTH (m)	EAST (m)	ORTHO HT (m)	NORTH (sft)	EAST (sft)	MONUMENT ASSEMBLY	REFERENCE MONUMENT				
PRIMARY CONTROL																						
CP01	CLX_030	529+18.431	71.67	RT	407582.586	2054614.054	960.01	CMON	Project Control Points	CONCRETE MONUMENT SET WITH 3.25" ODOT DISC	CP01	124220.3117	626191.6158	292.585	407546.1391	2054430.3263						
CP02	CLX_030	534+88.371	67.54	RT	407594.316	2055183.888	963.83	IPINS	Project Control Points	5/8" IRON PIN SET WITH ODOT REF CAP	CP02	124223.8866	626365.2861	293.749	407557.8681	2055000.1093						
CP03	CLX_030	542+85.187	-5.66	LT	407678.113	2055979.659	976.62	IPINS	Project Control Points	5/8" IRON PIN SET WITH ODOT REF CAP	CP03	124249.4257	626607.8159	297.646	407641.6576	2055795.8092						
CP04	CLX_030	547+94.510	68.83	RT	407610.414	2056489.930	975.33	IPINS	Project Control Points	5/8" IRON PIN SET WITH ODOT REF CAP	CP04	124228.7929	626763.3329	297.255	407573.9647	2056306.0346						
CP05	CLX_030	552+55.272	20.56	RT	407664.817	2056950.007	973.14	CMON	Project Control Points	CONCRETE MONUMENT SET WITH 3.25" ODOT DISC	CP05	124245.3735	626903.5521	296.586	407628.3628	2056766.0704						
CENTERLINE CONTROL																						
MN09	CLX_030	522+81.570	-0.10	LT	407645.867	2053976.294	965.79	CMON	Existing Centerline Control	CONCRETE MONUMENT FOUND	MN09	124239.5980	625997.2436	294.348	407609.4145	2053792.6233						
MN08	CLX_030	532+82.122	0.03	RT	407659.065	2054976.759	964.19	CMON	Existing Centerline Control	CONCRETE MONUMENT FOUND	MN08	124243.6204	626302.1587	293.858	407622.6113	2054792.9989						
MN02	CLX_030	542+57.188	0.08	RT	407672.007	2055951.739	975.58	MONBOX	Existing Centerline Control	MONUMENT BOX FOUND	MN02	124247.5648	626599.3066	297.332	407635.5522	2055767.8917						
MN05	CLX_030	551+81.494	0.10	RT	407684.299	2056875.964	976.28	CMON	Existing Centerline Control	CONCRETE MONUMENT FOUND	MN05	124251.3111	626880.9857	297.544	407647.8431	2056692.0340						
MN06	CLX_030	561+81.602	0.08	RT	407697.640	2057875.982	970.31	CMON	Existing Centerline Control	CONCRETE MONUMENT FOUND	MN06	124255.3770	627185.7646	295.724	407661.1829	2057691.9626						
MN07	CLX_030	571+81.808	-0.13	LT	407711.164	2058876.097	964.60	CMON	Existing Centerline Control	CONCRETE MONUMENT FOUND	MN07	124259.4988	627490.5730	293.986	407674.7057	2058691.9882						
MN10	CLX_089	179+17.355	0.00		406428.563	2055976.383	961.74	MONBOX	Existing Centerline Control	MONUMENT BOX FOUND	MN10	123868.5962	626606.8174	293.111	406392.2193	2055792.5335						
MN04	CLX_089	188+54.687	0.00		407365.713	2055957.895	969.50	MONBOX	Existing Centerline Control	MONUMENT BOX FOUND	MN04	124154.2145	626601.1828	295.476	407329.2855	2055774.0471						
MN03	CLX_089	191+42.537	-0.03	LT	407653.506	2055952.188	975.87	MONBOX	Existing Centerline Control	MONUMENT BOX FOUND	MN03	124241.9262	626599.4434	297.420	407617.0528	2055768.3406						
MN02	CLX_089	191+61.043	-0.09	LT	407672.007	2055951.739	975.58	MONBOX	Existing Centerline Control	MONUMENT BOX FOUND	MN02	124247.5648	626599.3066	297.332	407635.5522	2055767.8917						
MN01	CLX_089	198+85.424	0.00		408396.231	2055936.664	968.84	MONBOX	Existing Centerline Control	MONUMENT BOX FOUND	MN01	124468.2890	626594.7121	295.276	408359.7114	2055752.8180						
CENTERLINE ALIGNMENT ASD-030																						
POT	CLX_030	522+81.570	0.00		407645.771	2053976.295	0.00	CALPT	Centerline Alignment	CALCULATED POINT	POT	124239.5688	625997.2439	0.000	407609.3185	2053792.6243						
CALCPT5	CLX_030	542+57.278	0.00		407672.086	2055951.828	0.00	CALPT	Centerline Alignment	CALCULATED POINT	CALCPT5	124247.5889	626599.3337	0.000	407635.6311	2055767.9807						
POT	CLX_030	571+81.808	0.00		407711.039	2058876.099	0.00	CALPT	Centerline Alignment	CALCULATED POINT	POT	124259.4607	627490.5736	0.000	407674.5807	2058691.9902						
CENTERLINE ALIGNMENT ASD-089																						
MN10	CLX_089	179+17.355	0.00		406428.563	2055976.383	961.74	MONBOX	Centerline Alignment	MONUMENT BOX FOUND	MN10	123868.5962	626606.8174	293.111	406392.2193	2055792.5335						
MN04	CLX_089	188+54.687	0.00		407365.713	2055957.895	969.50	MONBOX	Centerline Alignment	MONUMENT BOX FOUND	MN04	124154.2145	626601.1828	295.476	407329.2855	2055774.0471						
PI	CLX_089	191+42.587	0.00		407653.557	2055952.216	0.00	CALPT	Centerline Alignment	CALCULATED POINT	PI	124241.9417	626599.4520	0.000	407617.1038	2055768.3686						
CALCPT5	CLX_089	191+61.120	0.00		407672.086	2055951.828	0.00	CALPT	Centerline Alignment	CALCULATED POINT	CALCPT5	124247.5889	626599.3337	0.000	407635.6311	2055767.9807						
MN01	CLX_089	198+85.424	0.00		408396.231	2055936.664	968.84	MONBOX	Centerline Alignment	MONUMENT BOX FOUND	MN01	124468.2890	626594.7121	295.276	408359.7114	2055752.8180						
BENCHMARKS																						
BM02	CLX_030	541+76.829	134.15	RT	407536.876	2055873.174	974.80	BM	Project Control Points	PONY SPIKE SET IN POWER POLE	BM02	124206.3805	626575.3621	297.093	407500.4332	2055689.3337						
BM03	CLX_030	543+11.714	-123.19	LT	407795.987	2056004.619	975.05	BM	Project Control Points	IRON PIN FOUND WITH 3" ODOT DISC UNDER MONUMENT LID	BM03	124285.3506	626615.4230	297.168	407759.5211	2055820.7669						
											0	0.0000	0.0000	0.000	0.0000	0.0000						
											0	0.0000	0.0000	0.000	0.0000	0.0000						

DESIGN AGENCY



DESIGNER

MAE

REVIEWER

CAD 01/15/21

PROJECT ID

110853

SHEET TOTAL

P.44 44

SURVEY CONTROL DATA