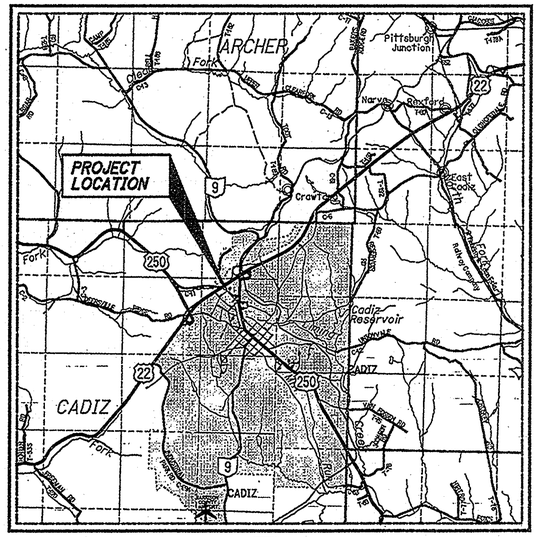
STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

HAS-22-17.24

CADIZ TOWNSHIP

HARRISON COUNTY



LOCATION MAP

LATITUDE: 40 °17'00" LONGITUDE: 81 °00'15"

SCALE IN MILES 0 1 2 3 4

PORTION TO BE IMPROVED

INTERSTATE HIGHWAY

FEDERAL ROUTES

STATE ROUTES

COUNTY & TOWNSHIP ROADS

OTHER ROADS

DESIGN DESIGNATION

	U.S. 22	T.R. 243
CURRENT ADT (2016)	6000	< 100
DESIGN YEAR ADT (2036)	8300	< 100
DESIGN HOURLY VOLUME (2036)	830	< 10
DIRECTIONAL DISTRIBUTION	53%	50%
TRUCKS (24 HOUR B&C)	20%	10%
DESIGN SPEED	60 MPH	35 MPH
LEGAL SPEED	55 MPH	35 MPH

DESIGN FUNCTIONAL CLASSIFICATION:
PRINCIPAL ARTERIAL / LOCAL

NHS PROJECT: YES

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

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

PLAN PREPARED BY:
EUTHENICS INC.
CONSULTING ENGINEERS
8235 Mohawk Drive, Strongsville, Ohio
(440) 260-1555

ENGINEERS SEAL:

STATE OF OHIO
LUKE A. BAKER
E-75415
REGISTERED PROFESSIONAL ENGINEER

SIGNED: Luke Baker
DATE: 5/5/14

ENGINEERS SEAL:

STATE OF OHIO
EDWARD P. SEFCIK
42085
REGISTERED PROFESSIONAL ENGINEER

SIGNED: Edward P. Sefcik
DATE: 5/5/14

INDEX OF SHEETS:

PROJECT DESCRIPTION

REMOVE EXISTING STRUCTURE CARRYING TOWNSHIP ROAD 243 OVER US 22. REALIGN THE TOWNSHIP ROAD TO THE NORTH OF US 22 TO ACCESS DENNISON AVENUE WEST OF THE EXISTING BRIDGE LOCATION. THE PROPOSED STORM SEWER WILL BE CONSTRUCTED TO THE WEST ALONG THE NORTH SIDE OF DENNISON AVENUE TO OUTLET THE DRAINAGE FROM RELOCATED T.R. 243.

PROJECT EARTH DISTURBED AREA:	4.67 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	6.85 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	11.52 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.

2013 SPECIFICATIONS

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

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

APPROVED Lloyd V. MacAdam, P.E., P.S.
DATE 2/26/15 DISTRICT DEPUTY DIRECTOR

APPROVED Jerry Wray
DATE 6-19-15 DIRECTOR, DEPARTMENT OF TRANSPORTATION

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	7/18/14	MGS-1.1	7/19/13	TC-42.20	10/18/13					SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
		MGS-2.1	7/19/13	TC-52.10	10/18/13					800 7/17/15	
CB-3.3	1/18/13	MGS-3.1	7/18/14	TC-52.20	7/18/14					832 1/17/14	
		MGS-6.1	7/19/13	TC-71.10	1/17/14					836 1/18/13	
HW-2.1	1/18/13									895 4/18/14	
HW-2.2	1/18/13	RM-1.1	7/18/14							995 1-20-12	
		RM-4.2	4/18/14								
MH-1.2	1/18/13										
		MT-95.30	7/18/14								
DM-1.1	1/18/13	MT-95.40	7/18/14								
DM-4.2	7/20/12	MT-95.50	7/19/13								
DM-4.3	7/19/13	MT-97.10	7/18/14								
DM-4.4	7/20/12										
		TC-41.20	10/18/13								
F-2.1	7/19/13	TC-41.30	10/18/13								
F-3.4	7/19/13	TC-41.40	10/18/13								

FEDERAL PROJECT NO. E110(645)
PID NO. 88923
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
HAS-22-17.24
1 / 51

HAS - US 22-17.240
(150498 PID - 88923
Dist 11 9/10/2015

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

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CURVE DATA
EXISTING ℄ R/W T.R. 243

(C6)
P.I. Sta. 45+47.92
Δ = 24° 12′ 33″ (RT)
Dc = 13° 23′ 59″
R = 427.58′
T = 91.70′
L = 180.67′
E = 9.72′
CH. = 179.32′
CH. BR. = N 46° 03′ 28″ W

(C7)
P.I. Sta. 48+52.83
Δ = 8° 24′ 52″ (LT)
Dc = 5° 12′ 00″
R = 1,101.84′
T = 81.05′
L = 161.82′
E = 2.98′
CH. = 161.67′
CH. BR. = N 38° 09′ 37″ W

(C8)
P.I. Sta. 51+82.25
Δ = 29° 15′ 00″ (RT)
Dc = 21° 20′ 00″
R = 268.57′
T = 70.08′
L = 137.11′
E = 8.99′
CH. = 135.62′
CH. BR. = N 27° 44′ 33″ W

(C9)
P.I. Sta. 55+61.01
Δ = 4° 07′ 14″ (LT)
Dc = 2° 39′ 00″
R = 2,162.10′
T = 77.78′
L = 155.49′
E = 1.40′
CH. = 155.46′
CH. BR. = N 15° 10′ 40″ W

CURVE DATA
EXISTING ℄ R/W DENNISON AVENUE (CO. HWY. 11)

(C1)
P.I. Sta. 350+85.61
Δ = 23° 39′ 30″ (RT)
Dc = 1° 50′ 00″
R = 3,125.23′
T = 654.56′
L = 1,290.46′
E = 67.81′
CH. = 1,281.31′
CH. BR. = S 87° 54′ 30″ E

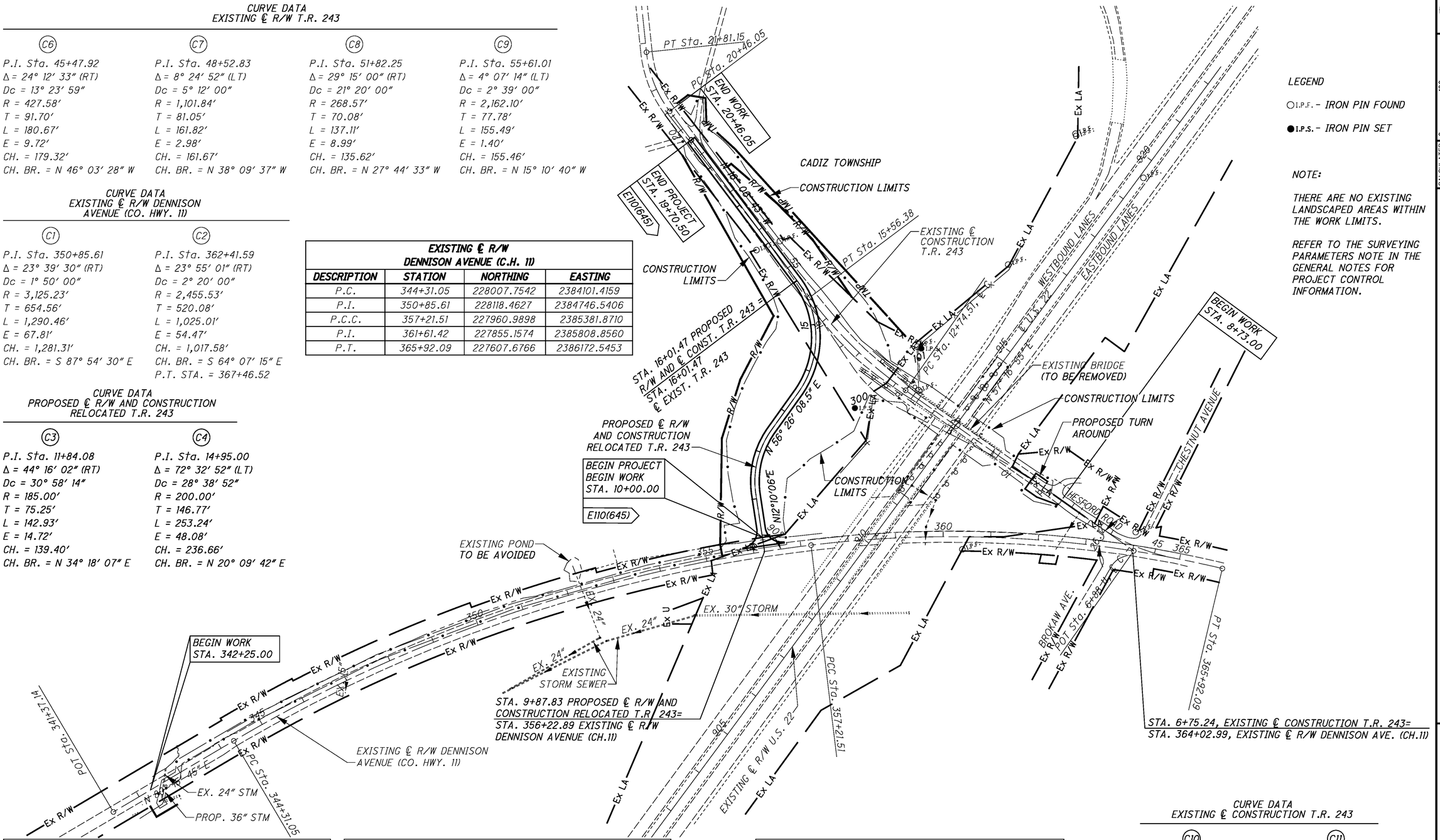
(C2)
P.I. Sta. 362+41.59
Δ = 23° 55′ 01″ (RT)
Dc = 2° 20′ 00″
R = 2,455.53′
T = 520.08′
L = 1,025.01′
E = 54.47′
CH. = 1,017.58′
CH. BR. = S 64° 07′ 15″ E
P.T. STA. = 367+46.52

CURVE DATA
PROPOSED ℄ R/W AND CONSTRUCTION RELOCATED T.R. 243

(C3)
P.I. Sta. 11+84.08
Δ = 44° 16′ 02″ (RT)
Dc = 30° 58′ 14″
R = 185.00′
T = 75.25′
L = 142.93′
E = 14.72′
CH. = 139.40′
CH. BR. = N 34° 18′ 07″ E

(C4)
P.I. Sta. 14+95.00
Δ = 72° 32′ 52″ (LT)
Dc = 28° 38′ 52″
R = 200.00′
T = 146.77′
L = 253.24′
E = 48.08′
CH. = 236.66′
CH. BR. = N 20° 09′ 42″ E

EXISTING ℄ R/W DENNISON AVENUE (C.H. 11)			
DESCRIPTION	STATION	NORTHING	EASTING
P.C.	344+31.05	228007.7542	2384101.4159
P.I.	350+85.61	228118.4627	2384746.5406
P.C.C.	357+21.51	227960.9898	2385381.8710
P.I.	361+61.42	227855.1574	2385808.8560
P.T.	365+92.09	227607.6766	2386172.5453



LEGEND

○ I.P.F. - IRON PIN FOUND

● I.P.S. - IRON PIN SET

NOTE:

THERE ARE NO EXISTING LANDSCAPED AREAS WITHIN THE WORK LIMITS.

REFER TO THE SURVEYING PARAMETERS NOTE IN THE GENERAL NOTES FOR PROJECT CONTROL INFORMATION.

EXISTING ℄ CONSTRUCTION T.R. 243 (HESFORD ROAD)			
DESCRIPTION	STATION	NORTHING	EASTING
P.C.	12+74.51	228194.5763	2385683.3295
P.I.	14+16.61	228312.3027	2385603.7531
P.T.	15+56.38	228448.8194	2385564.3184
P.C.	20+46.05	228919.2582	2385428.4257
P.I.	21+15.30	228985.7813	2385409.2096
P.T.	21+81.15	228052.7114	2385426.9563

PROPOSED ℄ R/W AND CONSTRUCTION RELOCATED T.R. 243 (HESFORD ROAD)			
DESCRIPTION	STATION	NORTHING	EASTING
P.C.	11+08.83	228101.4899	2385311.2950
P.I.	11+84.08	228175.0467	2385327.1560
P.T.	12+51.77	228216.6490	2385389.8571
P.C.	13+48.23	228269.9804	2385470.2359
P.I.	14+95.00	228351.1279	2385592.5379
P.T.	16+01.47	228492.1370	2385551.8055

EXISTING ℄ R/W U.S. 22		
LOCATION	NORTHING	EASTING
STA. 905+00, ℄	227658.4079	2385291.4106
STA. 915+00, ℄	228464.6939	2385885.6530

PROPOSED ℄ R/W AND CONSTRUCTION RELOCATED T.R. 243 CONTROL				
POINT	LOCATION	NORTHING	EASTING	ELEVATION
300	STA. 13+75.54, 118.69′ RT.	228197.5374	2385570.3616	1291.76
101	STA. 14+61.44, 222.42′ RT.	228264.8032	2385745.5539	1289.37

CURVE DATA
EXISTING ℄ CONSTRUCTION T.R. 243

(C10)
P.I. Sta. 14+16.61
Δ = 17° 56′ 40″ (RT)
Dc = 6° 21′ 58″
R = 900.00′
T = 142.10′
L = 281.87′
E = 11.15′
CH. = 280.72′
CH. BR. = N 25° 05′ 03″ W

(C11)
P.I. Sta. 21+15.30
Δ = 30° 57′ 45″ (RT)
Dc = 22° 55′ 06″
R = 250.00′
T = 69.24′
L = 135.10′
E = 9.41′
CH. = 133.46′
CH. BR. = N 00° 37′ 51″ W

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED DTB
CHECKED TJK

SCEMATIC PLAN

HAS-22-17.24

2
51

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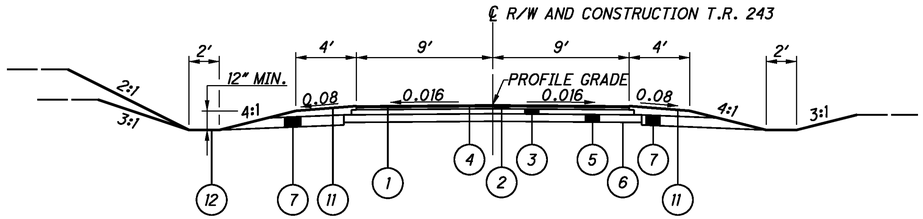
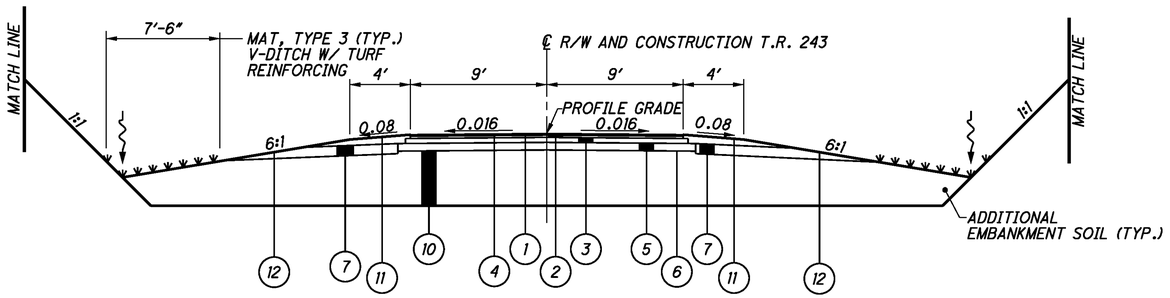
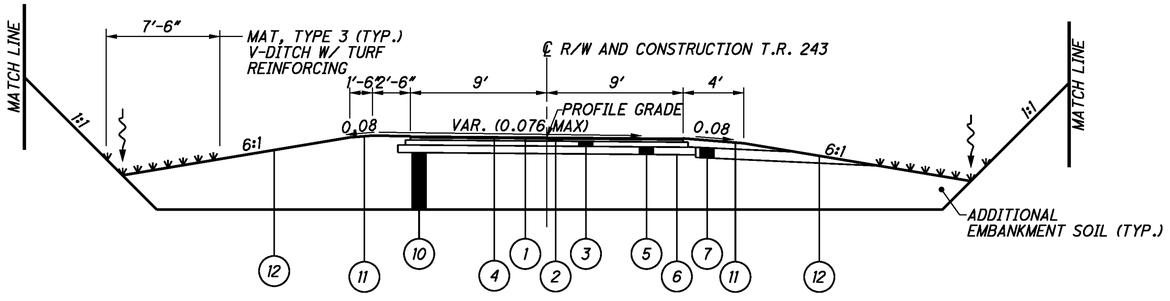


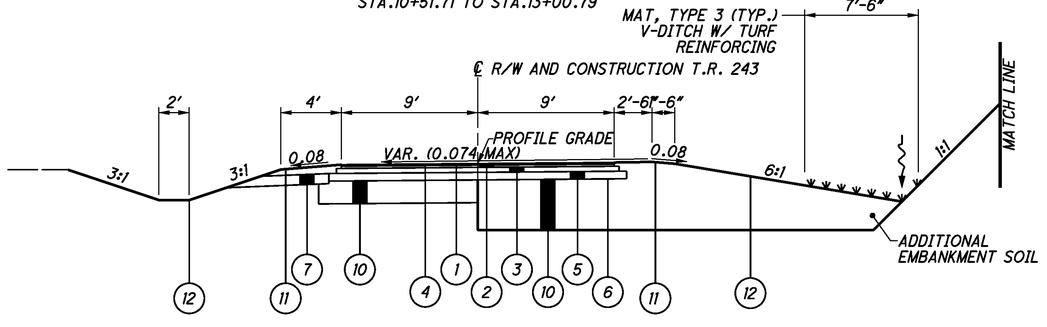
NORMAL SECTION
STA.17+75.00 TO STA.19+25.00



NORMAL SECTION - ROCK CUT
STA.16+75.00 TO STA.17+75.00



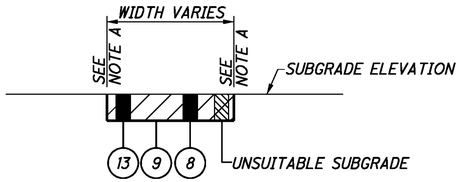
ROCK CUT SECTION
SUPERELEVATED SECTION
STA.10+51.71 TO STA.13+00.79



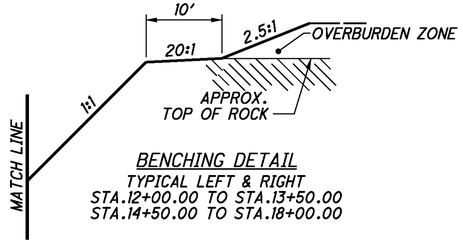
OVERBURDEN DITCH

SUPERELEVATED SECTION
STA.10+00.00 TO STA.10+51.71
STA.13+00.79 TO STA.16+75.00

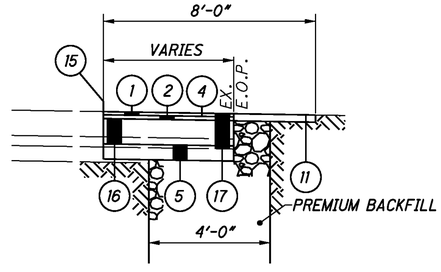
ROCK CUT DITCH



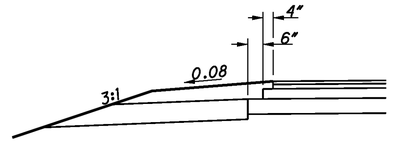
NOTE A:
THE UNDERCUT, BACKFILL, AND GEOTEXTILE SHOULD EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT.



BENCHING DETAIL
TYPICAL LEFT & RIGHT
STA.12+00.00 TO STA.13+50.00
STA.14+50.00 TO STA.18+00.00



PAVEMENT & BERM RESTORATION FOR PIPE INSTALLATION
DENNISON AVENUE (C.H. 11)



PAVEMENT BUILDUP AND ROCK CUT STEP DETAIL

PROPOSED LEGEND

1. ITEM 441 - 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN (PG70-22M)
2. ITEM 441 - 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
3. ITEM 301 - 4" ASPHALT CONCRETE BASE, PG 64-22
4. ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (0.04 GAL/SY)
5. ITEM 304 - 6" AGGREGATE BASE
6. ITEM 204 - SUBGRADE COMPACTION
7. ITEM 605 - AGGREGATE DRAINS
8. ITEM 204 - 18" GRANULAR MATERIAL, TYPE B OR C
9. ITEM 204 - GEOTEXTILE FABRIC
10. ITEM 203 - EMBANKMENT
11. ITEM 659 - SEEDING & MULCHING
12. ITEM 670 - TURF REINFORCING MAT, TYPE 3
13. ITEM 204 - EXCAVATION OF SUBGRADE (18")
14. ITEM 670 - SLOPE EROSION PROTECTION
15. ITEM 252 - FULL DEPTH PAVEMENT SAWING
16. ITEM 301 - 10" ASPHALT CONCRETE BASE, PG64-22
17. ITEM 202 - PAVEMENT REMOVED

TYPICAL SECTIONS - RELOCATED T.R. 243

HAS-22-17.24

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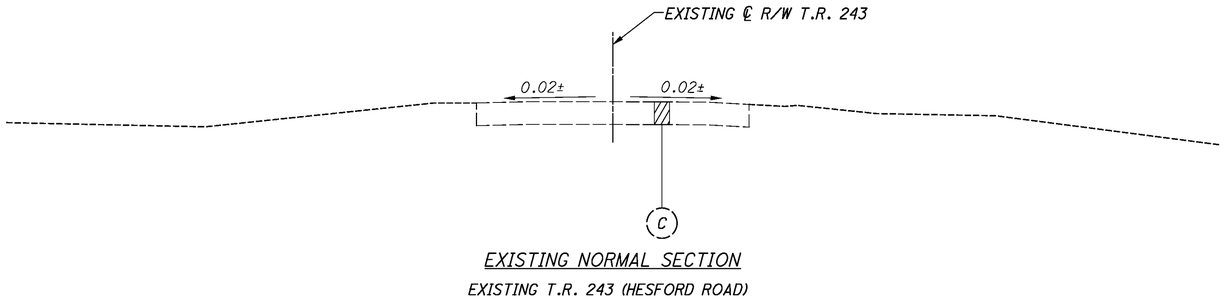
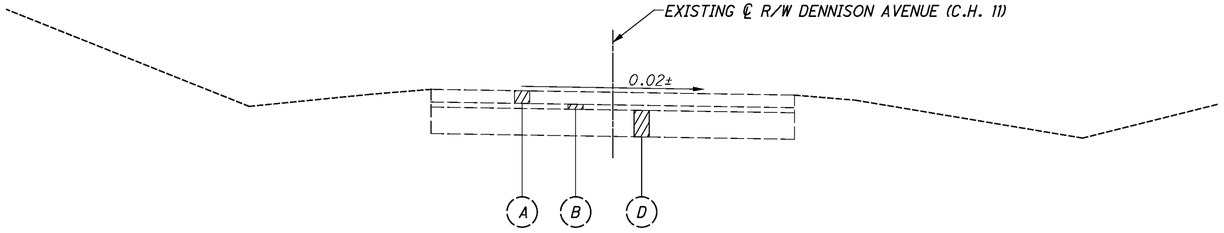


EXISTING NORMAL SECTION

EXISTING T.R. 243 (HESFORD ROAD)



EXISTING NORMAL SECTION

DENNISON AVENUE (C.H. 11)

EXISTING PAVEMENT

A) ASPHALT CONCRETE (10"±)

B) 4" CONCRETE

C) AGGREGATE BASE

D) SUBBASE

TYPICAL SECTIONS

HAS-22-17.24

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ROUNDING

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

UTILITIES

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

HARRISON COUNTY ENGINEER
538 NORTH MAIN STREET
CADIZ, OH 43907
CONTACT: MR. ROBERT STERLING, PE, PS
PHONE: (740) 942-8867

VILLAGE OF CADIZ
128 COURT STREET
CADIZ, OH 43907
CONTACT: TOM CARTER
PHONE: (740) 942-3884
EMAIL: CADIZWS@EOHIO.NET

ELECTRIC:
AEP OHIO POWER COMPANY
P.O. BOX 99
47687 NATIONAL ROAD
ST. CLAIRSVILLE, OH 43950
CONTACT: JEFF A. TURNER
PHONE: (740) 699-7845
EMAIL: JATURNER@AEP.COM

GAS:
COLUMBIA GAS
300 LURAY DRIVE
WINTERSVILLE, OH 43953
CONTACT: TIM SEECH
PHONE: (740) 266-4282
EMAIL: TGSEECH@NISOURCE.COM

TELEPHONE/COMMUNICATION:
FRONTIER COMMUNICATIONS
1121 TUSCARAWAS AVENUE, NW
NEW PHILADELPHIA, OH 44663
CONTACT: LARRY WENDELL
PHONE: (330) 364-0510
EMAIL: LAWRENCE.W.WENDELL@FTR.COM

TIME WARNER
617 TUSCARAWAS AVENUE
NEW PHILADELPHIA, OH 44663
CONTACT: DAMIAN RIFFLE
PHONE: (330) 494-9200
EMAIL: DAMIAN.RIFFLE@TWCABLE.COM

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

EXISTING PLANS

EXISTING PLANS ENTITLED HAS-22-15.09 (1959) MAY BE INSPECTED IN THE ODOT DISTRICT 11 OFFICE IN NEW PHILADELPHIA, OHIO.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 8PM AND 7AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

SURVEYING PARAMETERS

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

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88 (CORS96)
GEOID: GEOOID09

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE NORTH
COMBINED SCALE FACTOR: 1.00002431

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

WORK LIMITS

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

CLEARING AND GRUBBING

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

ITEM 204 - PROOF ROLLING

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

ITEM 204 - PROOF ROLLING 1 HOUR.

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607.

ITEM 208 - ROCK BLASTING

PERFORM THIS WORK AS REQUIRED IN ACCORDANCE WITH SECTION 208 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR ROCK BLASTING WORK:

208, PRE-BLASTING CONDITION SURVEY	LUMP
208, BLASTING CONSULTANT	LUMP
208, AIR BLAST AND NOISE CONTROL	LUMP
208, VIBRATION CONTROL AND MONITORING	LUMP
208, HYDROLIGIST	LUMP

ITEM 208 - PRESPLITTING, AS PER PLAN

PERFORM THIS WORK AS REQUIRED IN ACCORDANCE WITH SECTION 208 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS EXCEPT AS NOTED BELOW.

PRESPLITTING IS REQUIRED FOR ALL SLOPES 1 TO 1 OR STEEPER.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS WORK:

208, PRESPLITTING, AS PER PLAN	3,500 SQ YD

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.
2. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. THE EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSUITABLE SUBGRADE. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO 204.05.
   IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.
3. COMPACT THE SUBGRADE ACCORDING TO 204.03.
4. APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE SUBGRADE. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.
   PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO 204.06.
5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.
6. PROOF ROLL THE STABILIZED AREAS ACCORDING TO 204.06 TO VERIFY STABILITY.
7. 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.

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN (PG70-22M)

FOLLOW SPECIFICATION 703.05 EXCEPT DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED "SR" OR "SRH" ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

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.

ITEM 605 - AGGREGATE DRAINS

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

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 CONTRACTORS 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.

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE BRIDGE STRUCTURE SCHEDULED FOR REHABILITATION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO THE ADDRESS BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

MR. STEVE LOWRY
OHIO EPA, SEDO
2195 FRONT STREET
LOGAN, OHIO 43138

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER. INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. COPIES OF THE OEPA FORM AND BRIDGE INSPECTION REPORT ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 11 OFFICE, 2201 REISER AVENUE, NEW PHILADELPHIA, OHIO 44663.

BASIS FOR PAYMENT - THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 - STRUCTURE REMOVED, AS PER PLAN.

CALCULATED MRC
CHECKED DTB

GENERAL NOTES

HAS-22-17.24

SPRING DRAINS

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

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

605, 6" UNCLASSIFIED PIPE UNDERDRAINS FOR SPRINGS	50 FT.
605, AGGREGATE DRAINS FOR SPRINGS	50 FT.
611, PRECAST REINFORCED CONCRETE OUTLET	3 EACH

PAVEMENT AND BERM RESTORATION FOR PIPE INSTALLATIONS AND/OR REMOVALS

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

ITEM 202 - PAVEMENT REMOVED	454 SQ. YDS.
ITEM 252 - FULL DEPTH PAVEMENT SAWING	1050 FT.
ITEM 301 - 10" ASPHALT CONCRETE BASE, PG64-22	126 CU. YDS.
ITEM 304 - 6" AGGREGATE BASE	76 CU. YDS.
ITEM 407 - TACK COAT FOR INTERMEDIATE	18 GAL.
ITEM 441 - 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN (PG70-22M)	16 CU. YDS.
ITEM 441 - 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	22 CU. YDS.
ITEM 646 - EDGE LINE, 4"	1300 FT. (0.25 MI.)
ITEM 659 - SEEDING AND MULCHING (QUANTITY CARRIED TO SHEET 20)	825 SQ. YD.

PAVEMENT RESTORATION WIDTH INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH. SEE SHEET 3 FOR PAVEMENT RESTORATION AND BERM DETAIL. ADDITIONAL MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

SEEDING AND MULCHING

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

659,	SOIL ANALYSIS TEST	2	EACH
659,	TOPSOIL	1,557	CU. YD.
659,	REPAIR SEEDING AND MULCHING	702	SQ. YD
659,	INTER-SEEDING	702	SQ. YD.
659,	COMMERCIAL FERTILIZER	1.89	TON
659,	LIME	2.90	ACRES
659,	WATER	76	M. GAL.

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

POST CONSTRUCTION STORM WATER TREATMENT

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

UNSUITABLE SUBGRADE MATERIAL

WHERE UNSUITABLE SUBGRADE MATERIAL IS ENCOUNTERED, IT SHALL BE REMOVED TO THE DEPTH DETERMINED BY THE ENGINEER AND REPLACED IN EIGHT (8) INCH MAXIMUM (LOOSE DEPTH) MECHANICALLY COMPACTED LAYERS. SUITABLE EMBANKMENT MATERIAL (204.02) REQUIRED TO REPLACE THE UNDERCUT SUBGRADE SHALL, TO THE EXTENT POSSIBLE, EXHIBIT THE SAME PHYSICAL PROPERTIES AS THE ADJACENT SOUND SUBGRADE MATERIALS. HOWEVER, USE OF SLAG, IN ANY FORM, IS NOT PERMITTED. IN CONJUNCTION WITH THE ABOVE WORK, AN ESTIMATED QUANTITY OF ITEM 204, GEOTEXTILE FABRIC IS PROVIDED FOR USE AS DIRECTED BY THE ENGINEER.

REMOVAL OF UNSUITABLE SUBGRADE SHALL BE PAID UNDER ITEM 204, EXCAVATION OF SUBGRADE. THE COST OF FURNISHING AND COMPACTING SUITABLE EMBANKMENT MATERIAL IN PLACE SHALL BE PAID FOR UNDER ITEM 204, EMBANKMENT OR ITEM 204, GRANULAR MATERIAL, TYPE B.

THE FOLLOWING ESTIMATED QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

204	EXCAVATION OF SUBGRADE	500 CU YD
204	EMBANKMENT	150 CU YD
204	GRANULAR MATERIAL, TYPE B	350 CU YD
204	GEOTEXTILE FABRIC	700 SQ YD

ITEM 606 - IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)

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

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

ITEM 203 - EXCAVATION

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED FOR INFORMATION ONLY:

OVERBURDEN EXCAVATION	56,686 CU. YD.
ROCK EXCAVATION	26,525 CU.YD.

ENVIRONMENTAL COMMITMENTS

INSPECTION OF BRIDGE FOR BATS

PRIOR TO ANY DEMOLITION/REMOVAL OF THE EXISTING BRIDGE, THE CONTRACTOR SHALL CAREFULLY EXAMINE THE UNDERSIDE OF THE STRUCTURE FOR THE PRESENCE OF BATS. IF ANY BATS ARE FOUND, THE ODOT DISTRICT 11 ENVIRONMENTAL COORDINATOR SHOULD BE CONTACTED AT 330-339-6633 BEFORE COMMENCING WITH THE BRIDGE'S DEMOLITION.

BAT HABITAT/TREE CUTTING PLAN NOTE:

THIS PROJECT IS WITHIN THE KNOWN SUMMER BREEDING RANGES OF THE PROPOSED FEDERALLY ENDANGERED NORTHERN LONG-EARED BAT AND FEDERALLY ENDANGERED INDIANA BAT. IN ORDER TO AVOID IMPACTS TO THESE SPECIES, UNAVOIDABLE CUTTING OF ANY TREES CONTAINING POTENTIAL BAT HABITAT WILL BE PERFORMED ONLY BETWEEN OCTOBER 1 AND MARCH 31 WHEN THESE SPECIES WOULD NOT BE USING SUCH HABITAT.

WATERS OF THE US

A POND HAS BEEN IDENTIFIED WITHIN THE PROJECT AREA. THIS FEATURE IS SHOWN IN THE CONSTRUCTION PLANS. THE CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT NO IMPACTS OCCUR TO THE POND RESOURCE. NO TEMPORARY OR PERMANENT FILL OF ANY TYPE MAY BE PLACED IN THE POND AS PART OF THIS PROJECT. ANY ACTIVITIES OCCURING IN THE POND WOULD REQUIRE PERMITS FROM THE US ARMY CORP OF ENGINEERS AND/OR THE OHIO EPA.

ANY OTHER SITE PROPOSED BY THE CONTRACTOR FOR THE OFF PROJECT ANCILLARY CONSTRUCTION (STAGING AREAS, WASTE LOCATIONS, AND/OR BORROW LOCATIONS) MUST MEET THE REQUIREMENTS OF CMS 105.16.

CALCULATED MRC
CHECKED DTB

GENERAL NOTES

HAS-22-17.24

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MAINTENANCE OF TRAFFIC GENERAL NOTES

MAINTENANCE OF TRAFFIC

A MINIMUM OF 1 LANE(S) OF TRAFFIC ON T.R. 243 IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, AND ITEM 615 ROADS FOR MAINTAINING TRAFFIC.

A MINIMUM OF 1 LANE(S) OF TRAFFIC ON U.S. 22 IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, EXCEPT AS NOTED BELOW.

CLOSURES OF NO MORE THAN FIFTEEN (15) MINUTES IN DURATION TO PERFORM NECESSARY WORK ARE PERMITTED FROM MIDNIGHT TO 5:00 A.M. NECESSARY WORK SHALL INCLUDE BEAM REMOVAL, AND OTHER WORK OVER THE U.S. 22 TRAFFIC LANES, AS APPROVED BY THE ENGINEER. THESE CLOSURES SHALL BE IMPLEMENTED AS PER THE NOTES AND DETAILS SHOWN ON SHEET 9.

THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF TRAFFIC AT ALL TIMES IN ACCORDANCE WITH THE CMS. THE CONTRACTOR SHALL ERECT AND MAINTAIN ROAD WORK AHEAD AND END CONSTRUCTION SIGNS ON U.S. 22 DURING CONSTRUCTION. IF WORK ACTIVITIES OR EQUIPMENT ARE LOCATED CLOSER THAN 6 FEET BEYOND EXISTING GUARDRAIL ON THE OUTSIDE SHOULDERS, THE SHOULDERS SHALL BE CLOSED.

SHOULDER CLOSURE SHALL ALSO BE IMPLEMENTED FOR EXTENDED WORK PERIODS IN THE MEDIAN. THE CLOSURE OF ONE LANE AS PER STANDARD DRAWING MT-95.30 CAN BE IMPLEMENTED TO PERFORM OVERHEAD BRIDGE WORK.

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

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

DUST CONTROL

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

ITEM 616, WATER	1250 M. GAL

EARTHWORK FOR MAINTAINING TRAFFIC

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

EXCAVATION FOR MAINTAINING TRAFFIC	65 CU. YD.
EMBANKMENT FOR MAINTAINING TRAFFIC	160 CU. YD.

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

SUGGESTED SEQUENCE OF CONSTRUCTION

THE PROJECT SHALL BE CONSTRUCTED IN THREE PHASES IN ORDER TO MINIMIZE TRAFFIC DISRUPTION AND INCONVENIENCE TO THE TRAVELING PUBLIC.

PHASE 1: INSTALL PROPOSED STORM SEWER SYSTEM ALONG DENNISON AVENUE. ONE LANE OF TRAFFIC WILL BE MAINTAINED ALONG DENNISON AVENUE TO CONSTRUCT THE STORM SEWER ON THE NORTH SIDE. TRENCHES SHALL NOT BE LEFT OPEN OVERNIGHT. CONSTRUCT TEMPORARY T.R. 243.
- MAINTAIN TRAFFIC ON EXISTING T.R. 243 TRAVEL LANES.
- INSTALL TEMPORARY DRAINAGE.
- CONSTRUCT EARTHWORK FOR MAINTAINING TRAFFIC.
- CONSTRUCT PAVEMENT FOR MAINTAINING TRAFFIC.

PHASE 2: CONSTRUCT RELOCATED T.R. 243
- SHIFT TRAFFIC ONTO TEMPORARY ROAD (T.R. 243).
- REMOVE CLOSED PORTION OF EXISTING T.R. 243.
- CONDUCT ALL EARTHWORK AND GRADING OPERATIONS FOR PROPOSED CORRIDOR.
- INSTALL PROPOSED DRAINAGE STRUCTURES AND CONDUITS.
- PREPARE ROADWAY SUBGRADE AND CONSTRUCT PROPOSED PAVEMENT.
- INSTALL TRAFFIC CONTROL.

PHASE 3: STRUCTURE DEMOLITION
- OPEN RELOCATED T.R. 243 TO TRAFFIC. CONSTRUCT TURN AROUND.
- REMOVE TEMPORARY PAVEMENT FOR MAINTAINING TRAFFIC AND CONDUCT FINAL GRADING.
- CONDUCT STRUCTURE DEMOLITION OPERATIONS:
  - INSTALL FALSE WORK BETWEEN EXISTING BEAMS AND UNDER THE CANTILEVERED DECK.
  - REMOVED EXISTING CONCRETE DECK AND APPROACH SLABS.
  - REMOVE FALSE WORK.
  - REMOVE END SPANS OF STEEL BEAM SUPERSTRUCTURE DURING OUTSIDE-LANE CLOSURES.
  - REMOVE CENTER SPANS DURING PERIODS OF TRAFFIC SHUT-DOWNS AT NIGHT. CONTRACTOR SHALL STOP TRAFFIC FOR SHORT DURATIONS TO LIFT THE BEAMS. CLOSURE OF U.S. 22 SHALL BE AS PER PLAN INSERT SHEET 209960 SHOWN ON SHEET 9.
  - REMOVE SHOULDER PIERS AND ABUTMENTS UTILIZING SINGLE LANE CLOSURES.
  - REMOVE CENTER PIER UTILIZING SINGLE LANE CLOSURE.
- REMOVE REMAINING PORTIONS OF EXISTING T.R. 243.

FOLLOWING PHASE 3:
- INSTALL ROADSIDE INCIDENTALS.
- OPEN U.S. 22 TO NORMAL TRAFFIC CONFIGURATION.
- CONDUCT FINAL GRADING.

WORK OPERATIONS (DEMOLITION OF BRIDGE)

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'S VEHICLES AND EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE AMBER FLASHING LIGHT. AMBER LIGHT SHALL BE VISIBLE TO ALL DIRECTIONS OF TRAFFIC A MINIMUM OF 0.25 MILE.

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.

EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY A MIN. OF 6 FT BEHIND GUARDRAIL OR 30 FT FROM THE NEAREST EDGE OF PAVEMENT WHEN VARIOUS OPERATIONS ARE SCHEDULED TO CONTINUE THE NEXT WORKDAY. ON WEEKENDS OR AT OTHER TIMES OF SUSPENSION OF WORK, THE EQUIPMENT SHALL BE STORED AT A STORAGE AREA OUTSIDE OF THE ROADWAY RIGHT-OF-WAY. THE LOCATION SHALL HAVE PRIOR APPROVAL OF THE ENGINEER. ADEQUATE BARRICADES AND LIGHTS SHALL BE PLACED ON THE PAVEMENT SIDE OF THE EQUIPMENT TO IDENTIFY THE LIMITS OF THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT THE APPROVED CONTRACTOR'S STORAGE AREA.

FLOODLIGHTING

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

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

ITEM 614, BARRIER REFLECTORS AND/OR OBJECT MARKERS

BARRIER REFLECTORS AND/OR OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL. BARRIER REFLECTORS, OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO CMS 626, EXCEPT THAT THE SPACING SHALL BE 32 FEET. AN ESTIMATED QUANTITY OF:

ITEM 614 BARRIER REFLECTOR, TYPE B2	15 EACH
ITEM 614 OBJECT MARKER, 2-WAY	14 EACH

HAVE BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY.

NOTIFICATION OF WORK ZONE LANE RESTRICTIONS

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST EIGHTEEN (18) DAYS PRIOR TO IMPLEMENTATION OF ANY WORK ZONE RESTRICTIONS THAT WILL REDUCE THE WIDTH OR VERTICAL CLEARANCE OF ANY LANE ON WHICH TRAFFIC WILL BE MAINTAINED DURING CONSTRUCTION.

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

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS. THE APPROVED LIST IS AVAILABLE AT THE "ROADWAY STANDARDS: PROPRIETARY ROADSIDE SAFETY DEVICES" WEB PAGE ON THE OFFICE OF ROADWAY ENGINEERING WEBSITE.

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

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

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

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

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

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

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

A QUANTITY OF 1 EACH OF ITEM 614 WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (BIDIRECTIONAL) HAS BEEN CARRIED TO THE GENERAL SUMMARY.

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

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

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING
(OTHER HOLIDAY OR EVENT)	

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

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

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

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

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ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

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

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

THE PCMS LOCATIONS SHALL BE AS DIRECTED BY THE ENGINEER AND ARE INTENDED FOR PLACEMENT BEYOND THE WORK LIMITS OF CONSTRUCTION ACTIVITIES ALONG US 22 AND DENNISON AVENUE. 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.

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

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 CMS 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 6 SIGN MONTHS.

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

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

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

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

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

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

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

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

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

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

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

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 80 HOURS

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

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

SHORT DURATION CLOSING OF THE HIGHWAY

THE FOLLOWING NOTES SHALL APPLY FOR THE REQUIRED BLASTING OF ROCK ON THE HILLSIDE AND LIFTING THE BEAMS OFF OF THE EXISTING BRIDGE ALONG U.S. 22.

1. THE CONTRACTOR SHALL COORDINATE CLOSURE TIMES WITH HARRISON COUNTY AND THE STATE OF OHIO TRAFFIC AND LAW ENFORCEMENT DEPARTMENTS SO CLOSURES DO NOT OCCUR DURING CROWDED EVENTS WHICH INCREASE T.R. 243 TRAFFIC, DENNISON AVENUE TRAFFIC, AND U.S. 22 TRAFFIC.

2. THE MAXIMUM DURATION OF TWO LANE CLOSURES SHALL NOT EXCEED 15 MINUTES. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, TRAFFIC SHALL BE COMPLETELY CLEARED BEFORE BEGINNING THE NEXT CLOSURE.

3. THE CONTRACTOR SHALL FURNISH AND INSTALL TWO (2) "WATCH FOR STOPPED TRAFFIC" SIGNS (SPECIAL) 1500 FEET UPSTREAM FROM THE "ROAD CONSTRUCTION AHEAD" SIGNS ON T.R. 243, DENNISON AVENUE, AND U.S. 22. THE CONTRACTOR SHALL INSTALL ADDITIONAL "WATCH FOR STOPPED TRAFFIC" EVERY 1800 FEET UPSTREAM FROM THE "WATCH FOR STOPPED TRAFFIC) ON T.R. 243, DENNISON AVENUE, AND U.S. 22 IF TRAFFIC BACKUPS REACH THE FIRST SET OF SIGNS. THE NEED FOR THESE SIGNS SHALL BE CONSTANTLY MONITORED BY THE CONTRACTOR. ALL "WATCH FOR STOPPED TRAFFIC" SIGNS AND "PREPARE TO STOP" SIGNS SHALL BE EQUIPPED WITH A TYPE B HIGH INTENSITY FLASHING WARNING LIGHT.

4. A MINIMUM OF TWO (2) LAW ENFORCEMENT OFFICERS WITH PATROL VEHICLES SHALL BE USED TO PACE MOTORISTS TO A STOP. AFTER TRAFFIC HAS BEEN STOPPED, ONE PATROL VEHICLE SHALL TRAVEL ALONG THE ROADWAY SHOULDER 50 FEET BEHIND THE BACKUP OF STOPPED VEHICLES WHEN STOPPAGES OCCUR. IN THE VICINITY OF FREEWAY ENTRANCES OR EXITS, THE CONTRACTOR SHALL PLACE FLAGGERS ON THE RAMPS TO SLOW ENTERING TRAFFIC.

5. PATROL VEHICLES SHALL HAVE FLASHING BEACONS TO PROVIDE ADEQUATE VISIBILITY TO APPROACHING TRAFFIC. PAYMENT FOR THE ABOVE IS INCLUDED IN ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR.

6. CLOSURE OF T.R. 243, DENNISON AVENUE, AND U.S. 22 SHALL BE AS PER PLAN INSERT SHEET 209960 SHOWN ON SHEET 9.

7. FOR A PERIOD OF FIVE (5) CALENDAR DAYS BEFORE THE START OF ANY SHORT-TERM CLOSURES, THE CONTRACTOR SHALL PLACE A PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) NEAR THE POINT OF CLOSURE, FACING THE APPROPRIATE DIRECTION OF TRAVEL.

THE PCMS SHALL BE PROGRAMMED AS SHOWN IN THE DIAGRAM BELOW LABELED "PORTABLE CHANGEABLE MESSAGE SIGN ADVANCED NOTICE OF CLOSURE".

PORTABLE CHANGEABLE MESSAGE SIGN ADVANCED NOTICE OF CLOSURE

EXPECT DELAYS	DATE AND (DATE)	BETWEEN (TIME-TIME)
FRAME 1 0.8 SEC	FRAME 2 0.8 SEC	FRAME 3 0.8 SEC

CALCULATED MRC CHECKED JEN

MAINTENANCE OF TRAFFIC GENERAL NOTES

HAS-22-17.24

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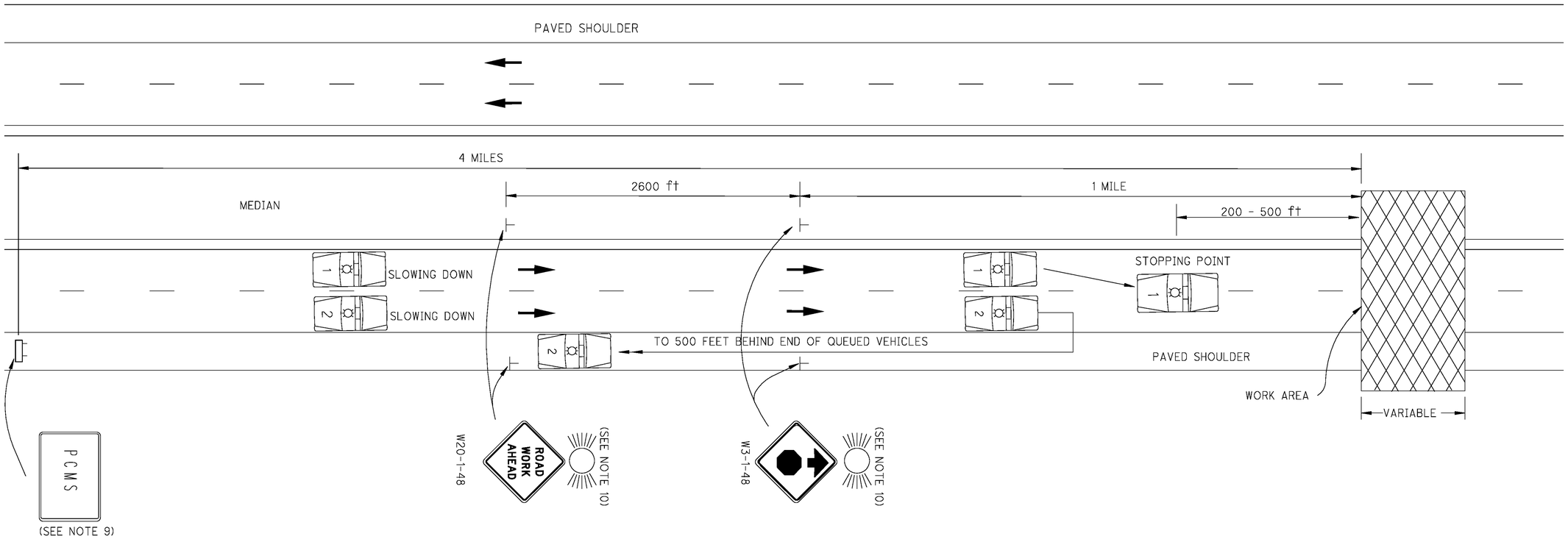

1. This type of highway closure shall be used for all construction, maintenance and utility operations when the duration of closure will not exceed 15 minutes.

2. A minimum of two law enforcement officers (LEO) with patrol cars per direction shall be provided to block traffic and pace motorists to a stop. The number of patrol cars shall equal the number of lanes closed on the highway.

3. Patrol cars, with lights flashing, should enter the stream of traffic at approximately 3 miles before the point of closure. At approximately 2 miles before the point of closure, they should begin the gradual slow down. Traffic shall be brought to a complete stop a safe distance, between 200 and 500 feet, from the work area. This slowing operation shall take no more than 10 minutes. After traffic has been stopped, one patrol car shall travel along the roadway shoulder 500 feet behind the end of the queued vehicles.

4. The Contractor shall not begin work until traffic has been brought to a complete stop.

5. All entrance ramps located between the stopped traffic and the work area shall be closed.

6. After the highway has been closed and reopened via this procedure, both of the following requirements shall have been met before implementation of another short duration closure, except with the approval of the Engineer:
   a) A minimum period of 15 minutes shall have elapsed; and
   b) The queued traffic shall have dissipated.

7. The time frame for stopping traffic shall be specified.

8. The public shall be given advance notice of the upcoming closure by providing portable changeable message signs at the site in advance of the scheduled closing. Closure information should also be provided to the Engineer.

9. An ODOT-approved portable changeable message sign, Class 1, shall be provided during operation. The message sign shall be placed approximately 4 miles in advance of the closure or as directed by the Engineer. The message shall be ROAD CLOSED AHEAD (2 sec.), PREPARE TO STOP (2 sec.)

10. The Contractor shall erect and maintain 48-inch ROAD WORK AHEAD and Stop Ahead signs on each side of the highway. Each sign shall be equipped with one Type A flashing warning light and one flare. There shall be one flare at each sign on both sides of the roadway. The flare shall be replaced if it burns out.

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OFFICE OF TRAFFIC ENGINEERING

DESIGNED SHB | REVIEWED LAM

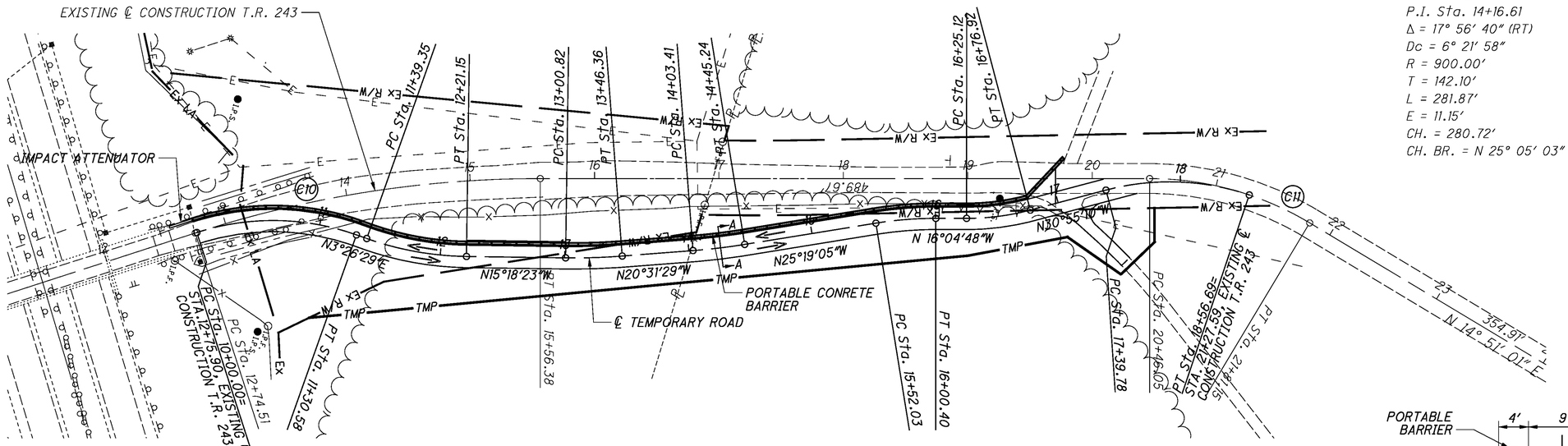
REVISION DATE 07/20/12 | CHECKED

PIS NUMBER 209960

PLAN INSERT SHEET

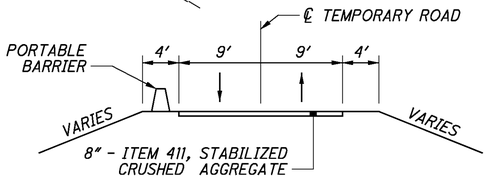
SHORT-DURATION CLOSURE OF MULTI-LANE DIVIDED HIGHWAY

HAS-22-17.24



CURVE DATA
EXISTING ℄ CONSTRUCTION T.R. 243

C10	C11
P.I. Sta. 14+16.61	P.I. Sta. 21+15.30
Δ = 17° 56′ 40″ (RT)	Δ = 30° 57′ 45″ (RT)
Dc = 6° 21′ 58″	Dc = 22° 55′ 06″
R = 900.00′	R = 250.00′
T = 142.10′	T = 96.24′
L = 281.87′	L = 135.10′
E = 11.15′	E = 9.41′
CH. = 280.72′	CH. = 133.46′
CH. BR. = N 25° 05′ 03″ W	CH. BR. = N 00° 37′ 51″ W



SECTION A-A

A QUANTITY OF 720 FT. OF ITEM 622 - PORTABLE BARRIER, 32″ HAS BEEN CARRIED TO THE GENERAL SUMMARY ON SHEET 12.

P.I. Sta. 10+67.72
Δ = 37° 24′ 35″ (RT)
Dc = 28° 38′ 52″
R = 200.00′
T = 67.72′
L = 130.58′
E = 11.15′
C = 128.28′
C.B. = N 15° 15′ 48″ W

P.I. Sta. 11+80.62
Δ = 18° 44′ 52″ (LT)
Dc = 22° 55′ 06″
R = 250.00′
T = 41.27′
L = 81.80′
E = 3.38′
C = 81.44′
C.B. = N 5° 55′ 57″ W

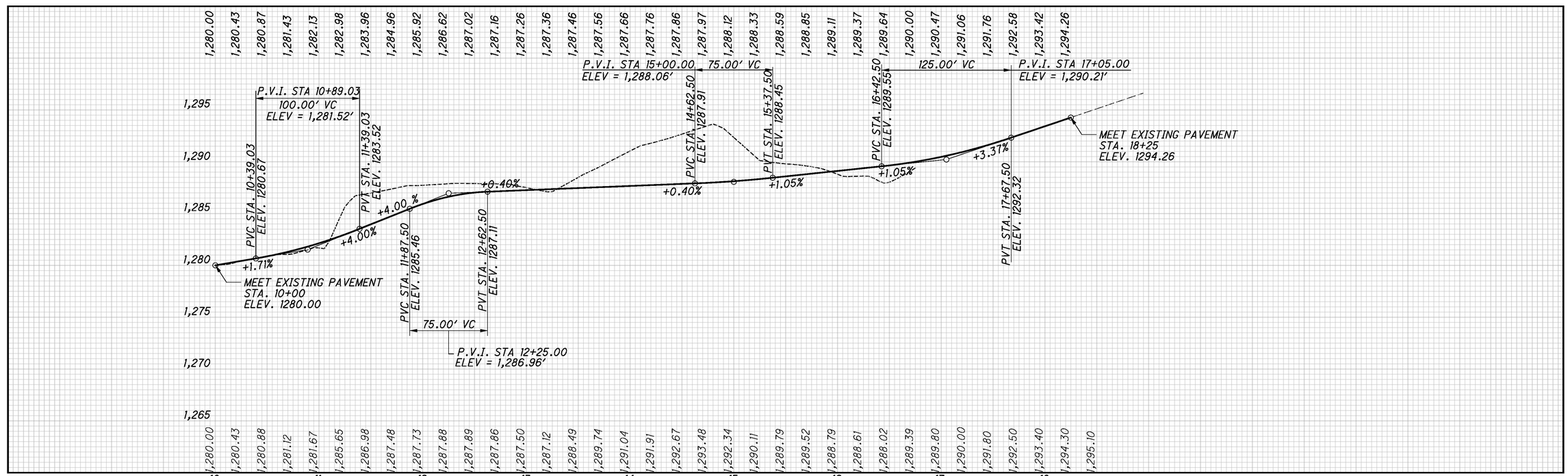
P.I. Sta. 13+23.60
Δ = 5° 13′ 06″ (LT)
Dc = 11° 27′ 33″
R = 500.00′
T = 22.78′
L = 45.54′
E = 0.52′
C = 45.52′
C.B. = N 17° 54′ 56″ W

P.I. Sta. 14+24.34
Δ = 4° 47′ 36″ (LT)
Dc = 11° 27′ 33″
R = 500.00′
T = 20.93′
L = 41.83′
E = 0.44′
C = 41.82′
C.B. = N 22° 55′ 17″ W

P.I. Sta. 15+76.27
Δ = 9° 14′ 17″ (RT)
Dc = 19° 05′ 55″
R = 300.00′
T = 24.24′
L = 48.37′
E = 0.98′
C = 48.32′
C.B. = N 20° 41′ 57″ W

P.I. Sta. 16+51.17
Δ = 14° 50′ 22″ (LT)
Dc = 28° 38′ 52″
R = 200.00′
T = 26.05′
L = 51.80′
E = 1.69′
C = 51.65′
C.B. = N 23° 29′ 59″ W

P.I. Sta. 17+99.96
Δ = 33° 29′ 34″ (RT)
Dc = 28° 38′ 52″
R = 200.00′
T = 60.18′
L = 116.91′
E = 8.86′
C = 115.25′
C.B. = N 14° 10′ 23″ W



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HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DTB
CHECKED JEN

MAINTENANCE OF TRAFFIC - TEMPORARY ROAD PLAN AND PROFILE

HAS-22-17.24

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SHEET NUMBER												PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5	6			13	19	20			44		OFFICE CALCS	01/NHS/BR	02/NFA/PV						
																		ROADWAY	
LUMP													LUMP	201	11000	LUMP		CLEARING AND GRUBBING	5
					1								1	202	20010	1	EACH	HEADWALL REMOVED	
	454												454	202	23000	454	SQ YD	PAVEMENT REMOVED	
					33								33	202	35100	33	FT	PIPE REMOVED, 24" AND UNDER	
					1,232								1,232	202	38000	1,232	FT	GUARDRAIL REMOVED	
					935								935	202	75000	935	FT	FENCE REMOVED	
						83,211							83,211	203	10000	83,211	CU YD	EXCAVATION	
						4,737							4,737	203	20000	4,737	CU YD	EMBANKMENT	
											2,342		2,342	204	10000	2,342	SQ YD	SUBGRADE COMPACTION	
	500												500	204	13000	500	CU YD	EXCAVATION OF SUBGRADE	
	150												150	204	20000	150	CU YD	EMBANKMENT	
	350												350	204	30010	350	CU YD	GRANULAR MATERIAL, TYPE B	
1													1	204	45000	1	HOUR	PROOF ROLLING	
	700												700	204	50000	700	SQ YD	GEOTEXTILE FABRIC	
LUMP													LUMP	208	10000	LUMP		PRE-BLAST CONDITION SURVEY	5
LUMP													LUMP	208	12000	LUMP		BLASTING CONSULTANT	5
LUMP													LUMP	208	13000	LUMP		AIR BLAST AND NOISE CONTROL	5
LUMP													LUMP	208	14000	LUMP		VIBRATION CONTROL AND MONITORING	5
3,500													3,500	208	15001	3,500	SQ YD	PRESPLITTING, AS PER PLAN	5
LUMP													LUMP	208	16000	LUMP		HYDROLOGIST	5
					87.5								87.5	606	15050	87.5	FT	GUARDRAIL, TYPE MGS	
					112.5								112.5	606	15550	112.5	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS	
					1								1	606	35002	1	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
					1								1	606	60012	1	EACH	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)	
					174								174	607	15000	174	FT	FENCE, TYPE 47	
									6				6	623	38501	6	EACH	MONUMENT ASSEMBLY, AS PER PLAN	44
																		EROSION CONTROL	
					6								6	601	32100	6	CU YD	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	
	2												2	659	00100	2	EACH	SOIL ANALYSIS TEST	
	1,557												1,557	659	00300	1,557	CU YD	TOPSOIL	
						14,031							14,031	659	10000	14,031	SQ YD	SEEDING AND MULCHING	
	702												702	659	14000	702	SQ YD	REPAIR SEEDING AND MULCHING	
	702												702	659	15000	702	SQ YD	INTER-SEEDING	
	1.89												1.89	659	20000	1.89	TON	COMMERCIAL FERTILIZER	
	2.90												2.90	659	31000	2.90	ACRE	LIME	
	76												76	659	35000	76	M GAL	WATER	
				LUMP									LUMP	832	15000	LUMP		STORM WATER POLLUTION PREVENTION PLAN	
				20,232									20,232	832	30000	20,232	EACH	EROSION CONTROL	
						1,300							1,300	836	10030	1,300	SQ YD	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3	
																		DRAINAGE	
					0.7								0.7	602	20000	0.7	CU YD	CONCRETE MASONRY	
	50												50	605	13402	50	FT	6" UNCLASSIFIED PIPE UNDERDRAINS FOR SPRINGS	
						527							527	605	31100	527	FT	AGGREGATE DRAINS	
	50												50	605	32200	50	FT	AGGREGATE DRAINS FOR SPRINGS	
					20								20	611	04400	20	FT	12" CONDUIT, TYPE B	
					56								56	611	07400	56	FT	18" CONDUIT, TYPE B	
					1,295								1,295	611	08900	1,295	FT	21" CONDUIT, TYPE B	
					77								77	611	09100	77	FT	21" CONDUIT, TYPE C	
					8								8	611	10400	8	FT	24" CONDUIT, TYPE B	
					26								26	611	16400	26	FT	36" CONDUIT, TYPE B	
					2								2	611	98410	2	EACH	CATCH BASIN, NO. 8	
					7								7	611	99574	7	EACH	MANHOLE, NO. 3 (48" BASE)	
					1								1	611	99574	1	EACH	MANHOLE, NO. 3 (72" BASE)	
					1								1	611	99580	1	EACH	MANHOLE, NO. 3 WITH 84" BASE I.D. AND 6" WEIR	
	3												3	611	99710	3	EACH	PRECAST REINFORCED CONCRETE OUTLET	
					1								1	895	10010	1	EACH	MANUFACTURED WATER QUALITY STRUCTURE, TYPE 1	

CALCULATED MRC
CHECKED KAB

GENERAL SUMMARY

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SHEET NUMBER												PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	6	7	8		10	20		40		41	OFFICE CALCS	01/NHS/ BR	02/NFA/ PV						
																		PAVEMENT	
	1,050												1,050	252	01500	1,050	FT	FULL DEPTH PAVEMENT SAWING	
	126										232		358	301	46000	358	CU YD	ASPHALT CONCRETE BASE, PG64-22	
	76										366		442	304	20000	442	CU YD	AGGREGATE BASE	
	18										81		99	407	14000	99	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
						25							25	411	10000	25	CU YD	STABILIZED CRUSHED AGGREGATE	
	16										70		86	441	50101	86	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN (PG70-22M)	5
	22										98		120	441	50300	120	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
																		TRAFFIC CONTROL	
								176.0					176	630	02100	176	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
								56.5					56.5	630	03100	56.5	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
								11.5					11.5	630	08520	11.5	FT	STREET NAME SIGN SUPPORT, NO. 3 POST	
								1					1	630	08600	1	EACH	SIGN POST REFLECTOR	
								71.5					71.5	630	80100	71.5	SQ FT	SIGN, FLAT SHEET	
								2					2	630	80500	2	EACH	SIGN, DOUBLE FACED, STREET NAME	
								9					9	630	85000	9	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	
								6					6	630	86002	6	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
	0.25							0.37					0.62	646	10000	0.62	MILE	EDGE LINE, 4"	
								0.18					0.18	646	10200	0.18	MILE	CENTER LINE	
								21					21	646	10400	21	FT	STOP LINE	
																		STRUCTURES 20' AND OVER	
										LUMP		LUMP		202	11001	LUMP		STRUCTURE REMOVED, AS PER PLAN	41
																		MAINTENANCE OF TRAFFIC	
			80										80	614	11110	80	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		1											1	614	12338	1	EACH	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	
		15											15	614	13302	15	EACH	BARRIER REFLECTOR, TYPE B2	
		14											14	614	13360	14	EACH	OBJECT MARKER, TWO WAY	
			6										6	614	18601	6	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	8
													LUMP	615	10000	LUMP		ROADS FOR MAINTAINING TRAFFIC	
		1250											1250	616	10000	1250	M GAL	WATER	
					720								720	622	41000	720	FT	PORTABLE BARRIER, 32"	
		LUMP										LUMP	LUMP	614	11000	LUMP		MAINTAINING TRAFFIC	
												4	11	619	16010	15	MONTH	FIELD OFFICE, TYPE B	
												LUMP	LUMP	623	10000	LUMP		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
												LUMP	LUMP	624	10000	LUMP		MOBILIZATION	

CALCULATED MRC
CHECKED KAB

GENERAL SUMMARY

HAS-22-17.24

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PROJECT DATA

TOTAL AREA (RIGHT OF WAY) ---------9.06 AC

PROJECT EARTH DISTURBED AREA -----4.67 AC

ESTIMATED CONTRACTOR EARTH-------6.85 AC DISTURBED AREA

NOTICE OF INTENT EARTH ------------11.52 AC DISTURBED AREA

IMPERVIOUS (PAVED) AREA FOR -------0.00 AC PRE- CONSTRUCTION SITE

IMPERVIOUS (PAVED) AREA FOR -------0.42 AC POST- CONSTRUCTION SITE

RUNOFF COEFFICIENT FOR ---------0.70 PRE- CONSTRUCTION SITE

RUNOFF COEFFICIENT FOR ---------0.76 POST- CONSTRUCTION SITE

POST CONSTRUCTION BMP: MANUFACTURED WATER QUALITY STRUCTURE, TYPE 1

IMMEDIATE RECEIVING WATERS -----STANDING STONE FORK

SUBSEQUENT RECEIVING WATERS ---TAPPAN LAKE

USGS 7.5' QUADRANGLE ----------JEWETT, OHIO

LONGITUDE ----------81° 00' 15"*

LATITUDE ----------40° 17' 00"*

* LONGITUDE AND LATITUDE TO APPROXIMATE CENTER OF PROJECT

PROJECT DESCRIPTION

REMOVE EXISTING STRUCTURE CARRYING TOWNSHIP ROAD 243 OVER US 22. REALIGN THE TOWNSHIP ROAD TO THE NORTH OF US 22 TO ACCESS DENNISON AVENUE WEST OF THE EXISTING BRIDGE LOCATION. THE PROPOSED STORM SEWER WILL BE CONSTRUCTED TO THE WEST ALONG THE NORTH SIDE OF DENNISON AVENUE TO OUTLET THE DRAINAGE FROM RELOCATED T.R. 243.

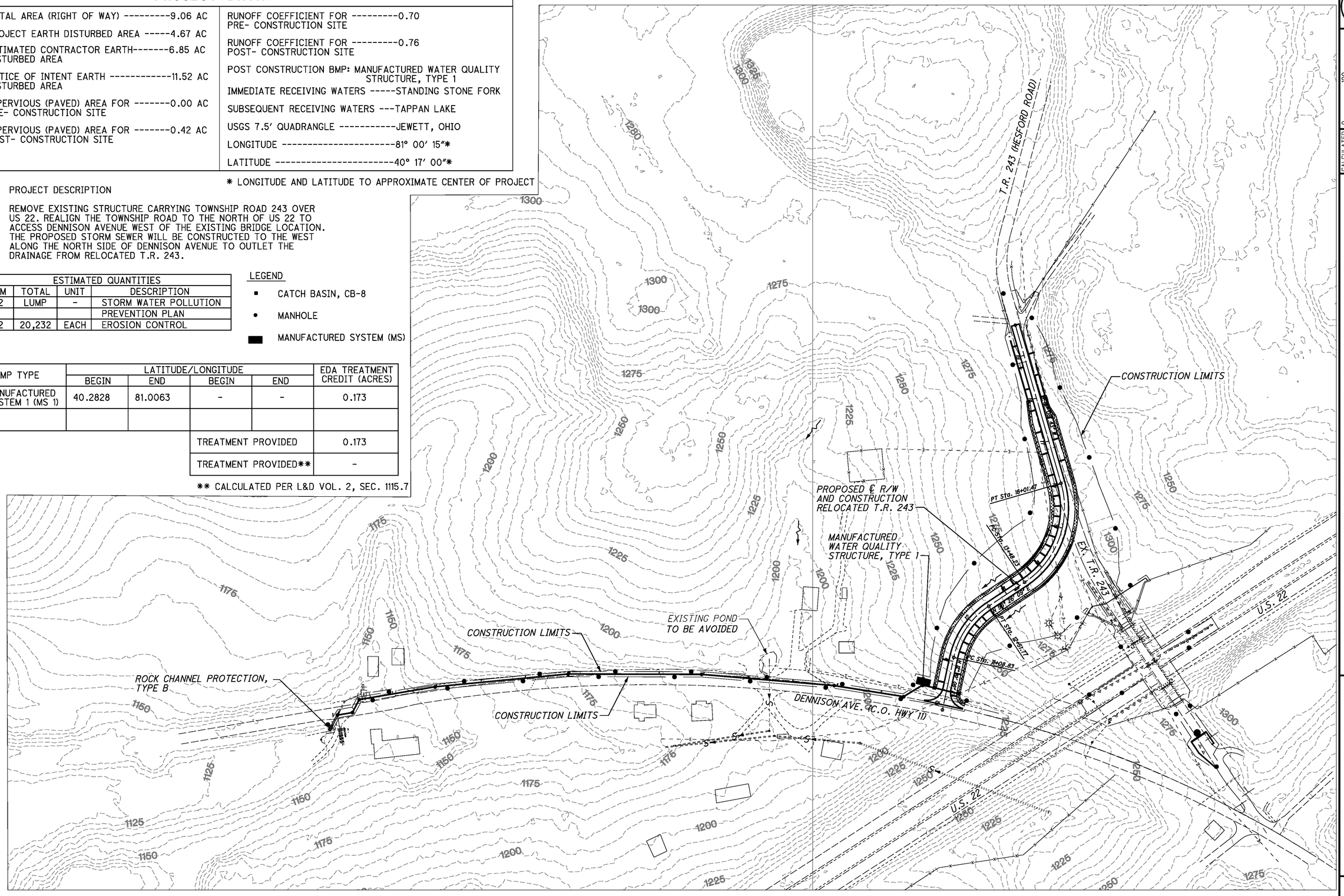
ESTIMATED QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION
832	LUMP	-	STORM WATER POLLUTION PREVENTION PLAN
832	20,232	EACH	EROSION CONTROL

LEGEND

- CATCH BASIN, CB-8
- MANHOLE
- MANUFACTURED SYSTEM (MS)

BMP TYPE	LATITUDE/LONGITUDE				EDA TREATMENT CREDIT (ACRES)
	BEGIN	END	BEGIN	END	
MANUFACTURED SYSTEM 1 (MS 1)	40.2828	81.0063	-	-	0.173
			TREATMENT PROVIDED		0.173
			TREATMENT PROVIDED**		-

** CALCULATED PER L&D VOL. 2, SEC. 1115.7



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HORIZONTAL SCALE IN FEET
0 50 100 150

CALCULATED DTB
CHECKED MRC

PROJECT SITE PLAN

HAS-22-17.24

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CURVE DATA
PROPOSED ℄ R/W AND CONSTRUCTION RELOCATED T.R. 243

(C3)	(C4)
P.I. Sta. 11+84.08	P.I. Sta. 14+59.00
Δ = 44° 16′ 02″ (RT)	Δ = 72° 32′ 52″ (LT)
Dc = 30° 58′ 14″	Dc = 28° 38′ 52″
R = 185.00′	R = 200.00′
T = 75.25′	T = 146.77′
L = 142.93′	L = 253.24′
E = 14.72′	E = 48.08′
CH. = 139.40′	CH. = 236.66′
CH. BR. = N 34° 18′ 07″ E	CH. BR. = N 20° 09′ 42″ E

CURVE DATA
EXISTING ℄ CONSTRUCTION T.R. 243

(C10)
P.I. Sta. 14+16.61
Δ = 17° 56′ 40″ (RT)
Dc = 6° 21′ 58″
R = 900.00′
T = 142.10′
L = 281.87′
E = 11.15′
CH. = 280.72′
CH. BR. = N 25° 05′ 03″ W

RESERVED AREA FOR MANUFACTURED WATER QUALITY STRUCTURE, TYPE 1
WQ-1
PROPOSED V-DITCH W/ TURF REINFORCING MAT, TYPE 3
CONSTRUCTION LIMIT
B-003-2-12
PROPOSED 2′ FLAT BOTTOM DITCH W/ TURF REINFORCING MAT, TYPE 3
PROPOSED ℄ R/W AND CONSTRUCTION RELOCATED T.R. 243
PC Sta. 13+48.23
7.50′ (TYP.)
MATCH LINE STA. 15+00
SEE SHEET 16
EXISTING INDIANA BAT TREE
D-12
N 56° 26′ 09″ E
18′ (TYP.)
B-003-0-12
AGGREGATE DRAINS (TYP.)
B-002-0-12
PROPOSED V-DITCH W/ TURF REINFORCING MAT, TYPE 3
PT Sta. 12+51.77
PC Sta. 11+08.83
N 12° 10′ 06″ E 91.00′
21″ STM
18″ STM
EXISTING BILLBOARD SIGN (ODOT ADC #32886) (TO BE REMOVED)
B-001-0-12
B-003-1-12
CONSTRUCTION LIMIT
EXISTING OVERHEAD ELECTRICAL LINE (AEP) TO BE RELOCATED
CONNECT TO EX. FENCE /STA. 13+17.5, 55.7′ LT. CORNER POST ASSEMBLY
EXISTING ℄ CONSTRUCTION T.R. 243
EXISTING FENCE TO BE REMOVED
+93.00
PT STA. 14+29.28, EXISTING ℄ R/W T.R. 243
STA. 14+29.28, 83.32′ RT. PROP. ℄ R/W AND CONST. RELOCATED T.R. 243
STA. 13+16.96, 94.88′ RT. CORNER POST ASSEMBLY
BEGIN PROJECT STA. 10+00.00
E110(645)
EXISTING OVERHEAD ELECTRICAL LINES (AEP) TO BE RELOCATED
EXISTING FENCE (TO REMAIN)
STA. 13+14.31, 11.53′ LT. CORNER POST ASSEMBLY
EXISTING CATCH BASIN (TO REMAIN)
PROPOSED FENCE, TYPE 47
CONNECT TO EX. FENCE STA. 13+09.04, 95.61′ RT. CORNER POST ASSEMBLY
SEE NOTE A
EXISTING CATCH BASIN (TO REMAIN)
+54.73
STA.9+87.83 PROP. ℄ R/W AND CONST. RELOCATED T.R. 243= STA. 356+22.89, EXISTING ℄ R/W DENNISON AVENUE (CO. HWY. 11)
EXISTING ℄ R/W DENNISON AVE. (C.H. 11)

LEGEND
BORING
AEP - AMERICAN ELECTRIC POWER

PROPOSED ℄ R/W AND CONSTRUCTION RELOCATED T.R. 243 CONTROL				
POINT	LOCATION	NORTHING	EASTING	ELEVATION
300	STA. 13+75.54, 118.69′ RT.	228197.5374	2385570.3616	1291.76
101	STA. 14+61.44, 222.42′ RT.	228264.8032	2385745.5539	1289.37

- EXISTING GRAVEL ROAD TO BE REMOVED. BACKFILL WITH ITEM 203, EMBANKMENT. SEED AND MULCH DISTURBED AREA. REMAINDER OF GRAVEL ROAD TO THE WEST INCLUDED WITH EARTHWORK QUANTITIES ON THE CROSS SECTIONS.

NOTE A:
PROPERTY LINE LOCATION PRIOR TO ITS ACQUISITION WITH PLANS HAS-22-15.09 DATED 1960 ON FILE AT ODOT DISTRICT 11.

FOR PROPOSED DENNISON AVENUE STORM SEWER PLAN, SEE SHEETS 33, 33A, 33B.
FOR TURF REINFORCEMENT MAT QUANTITIES, SEE CROSS SECTIONS
FOR INTERSECTION DETAIL, SEE SHEET 36.
FOR QUANTITIES, SEE SHEET 20 AND 21.

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED DTB
CHECKED MRC

PLAN - RELOCATED T.R. 243
STA. 10+00 TO STA. 15+00

HAS-22-17.24

14
51

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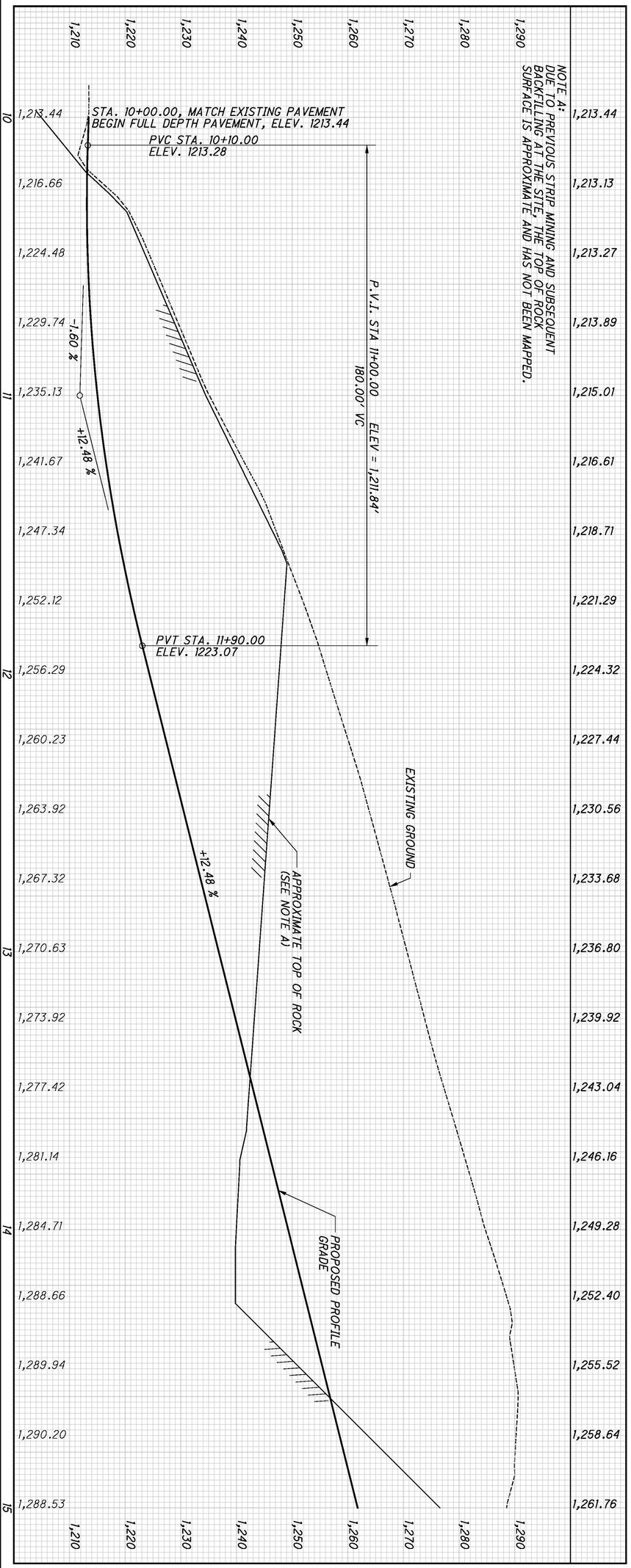

15 / 51	HAS-22-17.24	PROFILE - RELOCATED T.R. 243 STA. 10+00 TO STA. 15+00	CALCULATED DTB CHECKED MRC	0 10 20 40 HORIZONTAL SCALE IN FEET

C4

CURVE DATA
PROPOSED ℄ R/W AND CONSTRUCTION
RELOCATED T.R. 243

P.I. Sta. 14+95.00
Δ = 72° 32′ 52″ (LT)
Dc = 28° 38′ 52″
R = 200.00′
T = 146.77′
L = 253.24′
E = 48.08′
CH. = 236.66′
CH. BR. = N 20° 09′ 42″ E

CURVE DATA
EXISTING ℄ CONSTRUCTION T.R. 243

C10

P.I. Sta. 14+16.61
Δ = 17° 56′ 40″ (RT)
Dc = 6° 21′ 58″
R = 900.00′
T = 142.10′
L = 281.87′
E = 11.15′
CH. = 280.72′
CH. BR. = N 25° 05′ 03″ W

SEE SHEET 12

PT Sta. 16+01.47

PC # Sta. 54+83.12
3.41′ LT.

PROPOSED V-DITCH W/ TURF REINFORCING MAT, TYPE 3

EXISTING OVERHEAD ELECTRIC LINES (AEP) (TO BE RELOCATED)

PT Sta. 56+18.72

CONSTRUCTION LIMITS

PROPOSED 2′ FLAT BOTTOM DITCH

STA. 19+50.00, LT.
END 2′ FLAT BOTTOM DITCH

POT Sta. 19+49.50

END PROJECT
STA. 19+70.50
E110(645)

END WORK
STA. 20+46.05

U-20 U-21 U-22 U-23 U-24 U-25 U-26 U-27 U-28 U-29 U-30 U-31 U-32 U-33 U-34 U-35 U-36 U-37

C4 C9 C10

B-004-0-12

PROPOSED ℄ R/W AND CONSTRUCTION RELOCATED T.R. 243

7.50′ (TYP.)

18′ (TYP.)

N 16° 06′ 43″ W

MATCH LINE STA. 15+00

EXISTING ℄ CONSTRUCTION T.R. 243

EXISTING ℄ R/W T.R. 243

PT Sta. 15+56.18

EXISTING FENCE (TO BE REMOVED)

R-4

PROPOSED V-DITCH W/ TURF REINFORCING MAT, TYPE 3

STA. 17+50, LT. & RT.
END V-DITCH

PROPOSED 2′ FLAT BOTTOM DITCH

STA. 18+75, RT.
END 2′ FLAT BOTTOM DITCH

EXISTING FENCE (TO BE REMOVED)

B-005-0-12

R-12

R-11

PT Sta. 24+46.05

TMP

LEGEND
BORING
AEP - AMERICAN ELECTRIC POWER

VERTICAL SCALE IN FEET
0 5 10 20

FOR QUANTITIES SEE SHEET 19 AND 20.

C9

CURVE DATA
EXISTING
℄ R/W T.R. 243

P.I. Sta. 55+61.01
Δ = 4° 07′ 14″ (LT)
Dc = 2° 39′ 00″
R = 2,162.10′
T = 77.78′
L = 155.49′
E = 1.40′
CH. = 155.46′
CH. BR. = N15°10′40″W

NOTE A:
DUE TO PREVIOUS STRIP MINING AND SUBSEQUENT BACKFILLING AT THE SITE, THE TOP OF ROCK SURFACE IS APPROXIMATE AND HAS NOT BEEN MAPPED.

1,261.76 1,264.88 1,268.00 1,271.02 1,273.82 1,276.42 1,278.81 1,280.99 1,282.97 1,284.73 1,286.29 1,287.63 1,288.77 1,289.70 1,290.42 1,290.94 1,291.24 1,291.44

1,300
1,290
1,280
1,270
1,260
1,250
1,240

APPROXIMATE TOP OF ROCK (SEE NOTE A)

EXISTING GROUND

PROPOSED PROFILE GRADE

+12.48 %
+0.80 %
+12.48 %
+0.80 %
+0.80 %

PVC STA. 15+50.00
ELEV. 1268.00

P.V.I. STA 17+25.00 ELEV = 1,289.84′
350.00′ VC

PVT STA. 19+00.00
ELEV. 1292.24

STA. 19+70.50
END FULL DEPTH PAVEMENT
MATCH EXISTING PAVEMENT
ELEV. 1291.79

1,288.53 1,288.48 1,288.84 1,289.64 1,290.36 1,290.43 1,291.33 1,291.64 1,291.90 1,292.08 1,291.89 1,291.82 1,291.46 1,291.47 1,291.42 1,291.55 1,291.50 1,291.42 1,291.55

15 16 17 18 19

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DTB
CHECKED MRC

PLAN AND PROFILE - RELOCATE T.R. 243
STA. 15+00 TO STA. 19+71

HAS-22-17.24

16
51

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EXISTING ℄ R/W DENNISON AVENUE (C.H. 11)

EX LA

EX. 15"

EXISTING ℄ CONSTRUCTION
T.R. 243 (HESFORD RD.)

STA. 8+75

STA. 9+20

STA. 9+50

A

CONSTRUCTION LIMITS

GR-1

R-6

EXISTING GUARDRAIL
(TO BE REMOVED)

CONNECT TO EX. FENCE
STA. 10+47, 15' LT.
CORNER POST ASSEMBLY

+31.70

EXISTING FENCE
(TO REMAIN)

F-2

2'

25'

15'

1.5%

10

EX R/W

EX R/W

EX R/W

EX R/W

EX LA

EX LA

EX LA

EX LA

EX LA

EX LA

EXISTING BRIDGE
TO BE REMOVED

R-7

EXISTING FENCE
(TO REMAIN)

CONNECT TO EX. FENCE
STA. 10+40, 15' RT.
CORNER POST ASSEMBLY

EXISTING GUARDRAIL
(TO BE REMOVED)

PROPOSED
GUARDRAIL

CONSTRUCTION
LIMITS

-EXISTING GRAVEL ROAD TO BE REMOVED.
BACKFILL WITH ITEM 203, EMBANKMENT.
SEED AND MULCH DISTURBED AREA.

FOR QUANTITIES SEE SHEET 19 AND 20.

EXISTING ℄ CONSTRUCTION
T.R. 243 (HESFORD ROAD)

Ex R/W

Ex R/W

3:1

2.5:1

8" - ITEM 411, STABILIZED
CRUSHED AGGREGATE

8" - ITEM 411, STABILIZED
CRUSHED AGGREGATE

SECTION A-A

HORIZONTAL
SCALE IN FEET
0 5 10 20

CALCULATED DTB
CHECKED MRC

PLAN - EXISTING T.R. 243
STA. 7+75 TO STA. 11+00

HAS-22-17.24

17
51

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CONSTRUCTION LIMIT

EX. R/W

EXISTING BILLBOARD SIGN (ODOT ADC #32886) (TO BE REMOVED)

EXISTING OVERHEAD ELECTRICAL LINES (AEP) TO BE RELOCATED

PC Sta. 12+74.51

PC Sta. 51+15.17

EXISTING TRAFFIC SIGN (TO REMAIN)

EXISTING CONCRETE BARRIER (TO REMAIN)

EXISTING GUARDRAIL (TO REMAIN)

PROPOSED MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1

GR-2

GR-3

EX. BRIDGE (TO BE REMOVED)

N 42° 22' 03" W

R-8

WESTBOUND LANES

CONSTRUCTION LIMITS

EXISTING GUARDRAIL (TO BE REMOVED)

N 57° 16' 55" E

EXISTING ℄ R/W U.S. 22

R-9

PROPOSED IMPACT ATTENUATOR, TYPE 1, BIDIRECTIONAL

R-10

CONSTRUCTION LIMITS

EXISTING GUARDRAIL (TO BE REMOVED)

EASTBOUND LANES

EXISTING GUARDRAIL (TO REMAIN)

PT Sta. 49+33.60

EXISTING TRAFFIC SIGN (TO REMAIN)

EXISTING CONCRETE BARRIER (TO BE REMOVED)

EXISTING ℄ R/W AND CONSTRUCTION DENNISON AVENUE (CO. HWY. 11)

Ex LA

Ex R/W

910 911 912 913 914 915

358 359 360

52 13 17 11 49

FOR QUANTITIES SEE SHEET 19 AND 20.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DTB
CHECKED MRC

PLAN - U.S. 22
STA. 910+00 TO STA. 915+00

HAS-22-17.24

18
51

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REF NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 HEADWALL REMOVED	202 PIPE REMOVED, 24" AND UNDER	202 GUARDRAIL REMOVED	202 FENCE REMOVED	601 ROCK CHANNEL PROTECTION, TYPE B, WITH FILTER	602 CONCRETE MASONRY	606 GUARDRAIL, TYPE MGS	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 GUARDRAIL, BARRIER DESIGN, TYPE MGS	606 IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)	607 FENCE, TYPE 47	611 12" CONDUIT, TYPE B	611 18" CONDUIT, TYPE B	611 21" CONDUIT, TYPE B	611 21" CONDUIT, TYPE C	611 24" CONDUIT, TYPE B	611 36" CONDUIT, TYPE B	611 MANHOLE NO. 3 W/ 48" BASE	611 MANHOLE NO. 3 W/ 72" BASE	611 MANHOLE, NO. 3 WITH 84" BASE I.D. AND 6" WEIR	611 CATCH BASIN, NO. 8	895 MANUFACTURED WATER QUALITY STRUCTURE, TYPE 1
					EACH	FT	FT	FT	CU YD	CU YD	FT	EACH	FT	EACH	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH
		EXIST. ℄ R/W & CONST. DENNISON AVE. (C.H. 11)																								
D-1	36	342+32.31	342+40.25	RT					6	0.7																
D-2	36	342+40.25	342+56.11	RT	1	25														26			1			
D-3	36	342+56.11	342+61.00	LT		8													8							
D-4	36	342+56.11	342+90.00	RT														34			1					
D-5	36	342+90.00	343+10.00	RT/LT														34			1					
D-6	36	343+10.00	344+82.00	LT														172			1					
D-7	36-37	344+82.00	347+80.00	LT														300			1					
D-8	37	347+80.00	350+78.00	LT														299			1					
D-9	37-38	350+78.00	353+75.00	LT														298			1					
D-10	38	353+75.00	355+32.00	LT														158			1					
D-11	38	355+32.00	355+68.75	LT															50							
D-12	38	355+68.75	355+95.33	LT															27						1	
D-13	38	355+95.33	356+50.54	LT													56								1	
WQ-1	38	355+68.75		LT												20								1		1
		EXIST. ℄ CONST. T.R. 243																								
GR-1	17	9+52		RT/LT							37.5															
R-1	14	12+58.25	13+17.5	LT				73																		
R-2	14	12+40	13+77	LT			140																			
R-3	14	12+39	13+81	RT			140																			
R-4	14	12+68	19+65	RT				703																		
R-5	14	12+51.90	13+09	RT				99																		
R-6	17	9+12	10+38	LT			126																			
R-7	17	9+11	10+37	RT			126																			
F-1	14	13+09.04	13+24.50	RT/LT											144											
F-2	17	10+40	10+41	RT/LT											30											
		PROPOSED ℄ CONSTRUCTION RELOCATED T.R. 243																								
R-11	16	19+94	20+31	RT				55																		
R-12	16	19+94	19+98	RT				5																		
		EXIST. ℄ R/W U.S. 22																								
R-8	18	911+23.40	914+70	LT			350																			
R-9	18	913+45.00	914+70	LT/RT			125																			
R-10	18	911+20.73	913+36.81	RT			225																			
GR-2	18	911+25.15	911+75.15	LT							50	1														
GR-3	18	911+75.15	913+17.92	LT									112.5	1												
TOTALS CARRIED TO GENERAL SUMMARY					1	33	1,232	935	6	0.7	87.5	1	112.5	1	174	20	56	1,295	77	8	26	7	1	1	2	1

CALCULATED MRC
CHECKED KAB

ESTIMATED QUANTITIES

HAS-22-17.24

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HAS-22-17.24 PLAN AND PROFILE SHEETS UNDERDRAIN QUANTITIES				
REF. NO.	SHEET NO.	STATION	SIDE	ITEM 605 AGGREGATE UNDERDRAINS
				FT
U-1	14	10+25	RT	13
U-2	14	10+50	LT	15
U-3	14	10+75	RT	15
U-4	14	11+00	LT	15
U-5	14	11+25	RT	15
U-6	14	11+50	RT	15
U-7	14	11+75	RT	15
U-8	14	12+00	RT	15
U-9	14	12+25	RT	15
U-10	14	12+50	RT	15
U-11	14	12+75	RT	15
U-12	14	13+00	LT	15
U-13	14	13+25	LT	15
U-14	14	13+50	LT	15
U-15	14	13+75	LT	15
U-16	14	14+00	LT	15
U-17	14	14+25	LT	15
U-18	14	14+50	LT	15
U-19	14	14+75	LT	15
U-20	14	15+00	LT	15
U-21	16	15+25	LT	15
U-22	16	15+50	LT	15
U-23	16	15+75	LT	15
U-24	16	16+00	LT	15
U-25	16	16+25	LT	15
U-26	16	16+50	RT	15
U-27	16	16+75	LT	15
U-28	16	17+00	RT	15
U-29	16	17+25	LT	15
U-30	16	17+50	RT	15
U-31	16	17+75	LT	14
U-32	16	18+00	RT	10
U-33	16	18+25	LT	10
U-34	16	18+50	RT	10
U-35	16	18+75	LT	10
U-36	16	19+00	RT	15
U-37	16	19+25	LT	10
		TOTAL CARRIED TO GENERAL SUMMARY		527

HAS-22-17.24 CROSS SECTIONS EARTHWORK AND SEEDING QUANTITIES				
SHEET NO.	ITEM 203 EMBANKMENT	ITEM 203 EXCAVATION	ITEM 659 SEEDING AND MULCHING	ITEM 659 SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3
	CU YD	CU YD	SQ YD	SQ YD
21	521	3,804	616	138
22	348	4,391	139	83
23	347	5,784	294	83
24	348	6,906	569	83
25	351	8,278	839	83
26	351	9,819	1,219	83
27	174	10,694	1,331	83
28	0	9,800	1,208	83
29	174	7,255	978	83
30	696	8,223	1,044	166
31	1,064	6,476	1,227	249
32	180	1,526	1,280	83
33	1	48	381	0
TOTAL CARRIED TO EROSION CONTROL QUANTITY TABLE			11,125	
TOTAL CARRIED TO GENERAL SUMMARY	4,555	83,004		1,300

ITEM 659 - EROSION CONTROL QUANTITIES		
SEEDING AND MULCHING	825 (SHEET 6) + 11,125 + 2,081	14,031 SQ YD
SOIL ANALYSIS TESTS		2 EACH
TOPSOIL	$\frac{111 \text{ CU YD}}{1000 \text{ SQ YD OF SEEDING}}$ X 14,031 SQ YD	1,557 CU YD
COMMERCIAL FERTILIZER	$\frac{1 \text{ TON}}{7410 \text{ SQ YD OF SEEDING}}$ X 14,031 SQ YD	1.89 TON
LIME	$\frac{9}{43560}$ X 14,031 SQ YD	2.90 ACRE
REPAIR SEEDING AND MULCHING	$\frac{5}{100}$ X 14,031 SQ YD	702 SQ YD
INTER-SEEDING	$\frac{5}{100}$ X 14,031 SQ YD	702 SQ YD
WATER	$\frac{2 \text{ X } .0027 \text{ M GAL}}{1 \text{ SQ YD OF SEEDING}}$ X 14,031 SQ YD	76 M GAL
QUANTITIES CARRIED TO GENERAL NOTES SHEET NO. 6		

HAS-22-17.24 EARTHWORK AND SEEDING QUANTITIES								
STATION		SIDE	SHEET NO.	DIGITIZED AREA	ITEM 203 EMBANKMENT	ITEM 203 EXCAVATION	ITEM 411 STABILIZED CRUSHED AGGREGATE (8")	ITEM 659 SEEDING AND MULCHING
FROM	TO			SQ FT	CU YD	CU YD	CU YD	SQ YD
8+75.00	9+50.00	LT	17	858.44	-	21	21	-
9+20.00	9+50.00	RT	17	162.40	-	4	4	-
9+50.00	10+36.70	LT/RT	17	1,630.80	40	40	-	181
10+50	10+90	℄	17	1,600	-	-	-	178
12+00	12+40	℄	14	1,600	-	-	-	178
12+54.73	13+93.00	LT/RT	14	2,857.00	71	71	-	317
911+25*	914+70*	℄	18	11,040	71	71	-	1,227
TOTAL CARRIED TO EROSION CONTROL QUANTITY TABLE								2,081
TOTAL CARRIED TO GENERAL SUMMARY					182	207	25	

STATIONS LISTED ABOVE ARE STATIONED OFF OF EXISTING ℄ T.R. 243.
* STATIONED OFF OF EXISTING ℄ R/W U.S. 22

CALCULATED MRC
CHECKED DTB

QUANTITY CALCULATIONS

HAS-22-17.24

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SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	150 (83)			2,760	348
25AH (15)AH		1051	187		
	466 (55)			1044	173
0 (0)		77 0	0 0		
(138)	616			3,804	521

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

1230 1225 1220 1215 1210 1205

APPROXIMATE TOP OF ROCK

1:1

7'-6"

MAT, TYPE 3 (TYP.) V-DITCH W/ TURF REINFORCING

6:1

F.L. 1210.44

EL. 1208.56

6:1

7'-6"

1:1

F.L. 1210.81

EL. 1208.93

REMOVE EXISTING ROCK AND REPLACE WITH ITEM 203, EMBANKMENT (TYP.)

1213.27
10+50
1224.48

SPILL QUANTITY (SEEDING)
TOTAL DIGITIZED AREA = 6,228 S.F.
STA. 10+00 TO STA. 10+50
LESS PAVEMENT & TURF REINFORCEMENT
= 4,195 S.F.
= 466 S.Y.

SPILL QUANTITY (TURF REINFORCED MAT)
DIGITIZED AREA - (125 S.F. + 368 S.F.)/9 = 55 S.Y.
STA. 10+00 TO STA. 10+50

(##) ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3

1213.44
10+00
1213.44

℄ CONSTRUCTION

ITEM 203, EMBANKMENT

TOTALS CARRIED TO SHEET 20

TOTALS CARRIED TO SHEET 20

CALCULATED DTB CHECKED SAH

CROSS SECTIONS RELOCATED TR 243
STA. 10+00.00 TO STA. 10+50.00

HAS-22-17.24

21
51

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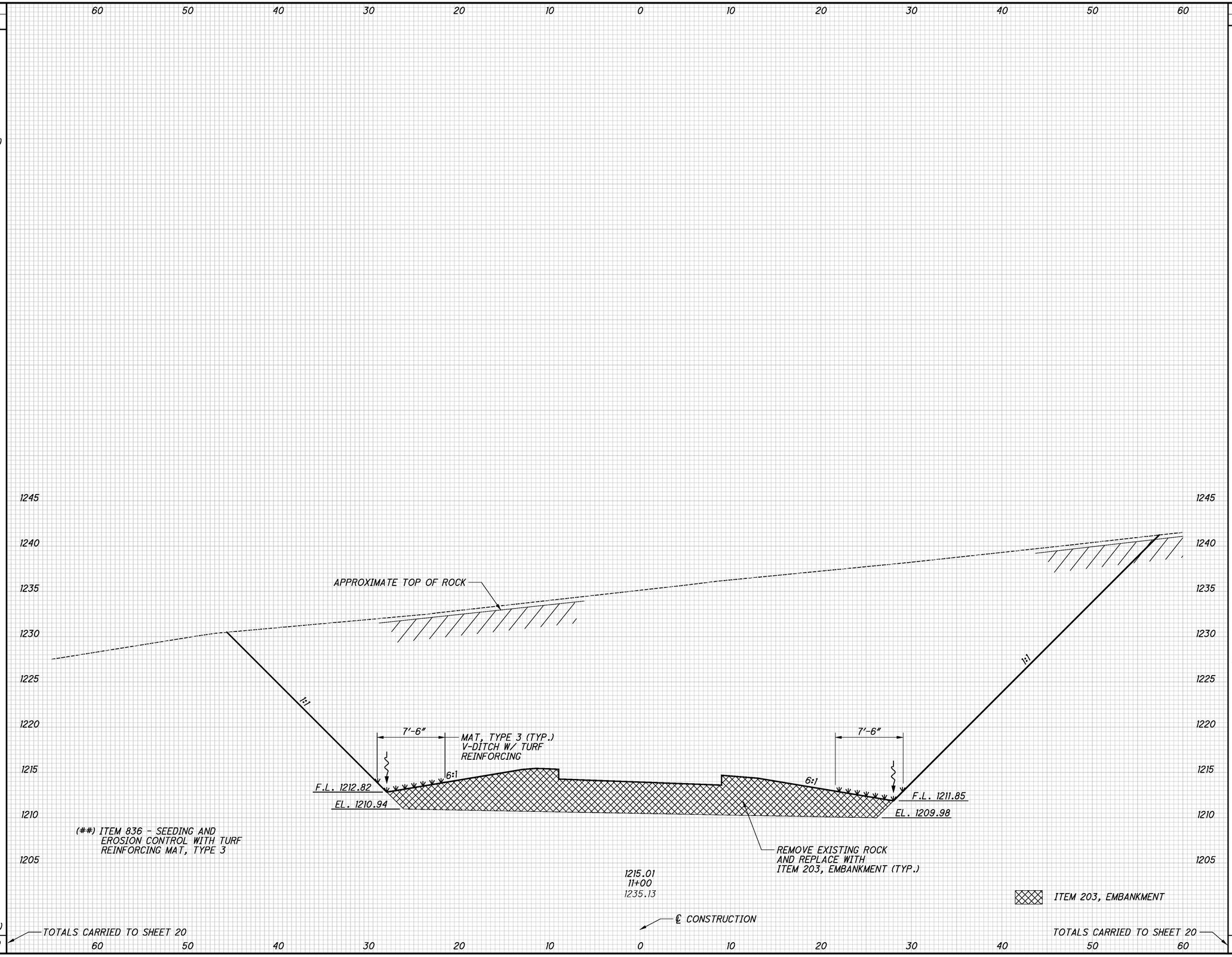
SEEDING	
END WIDTH	SQ. YDS.
	139 (83)
	25 (15)
(83)	139

END AREA	
CUT	FILL
1930	189

VOLUME	
CUT	FILL
4,391	348
4,391	348

CALCULATED DTB

CHECKED SAH



CROSS SECTIONS RELOCATED TR 243
STA. 11+00.00

HAS-22-17.24

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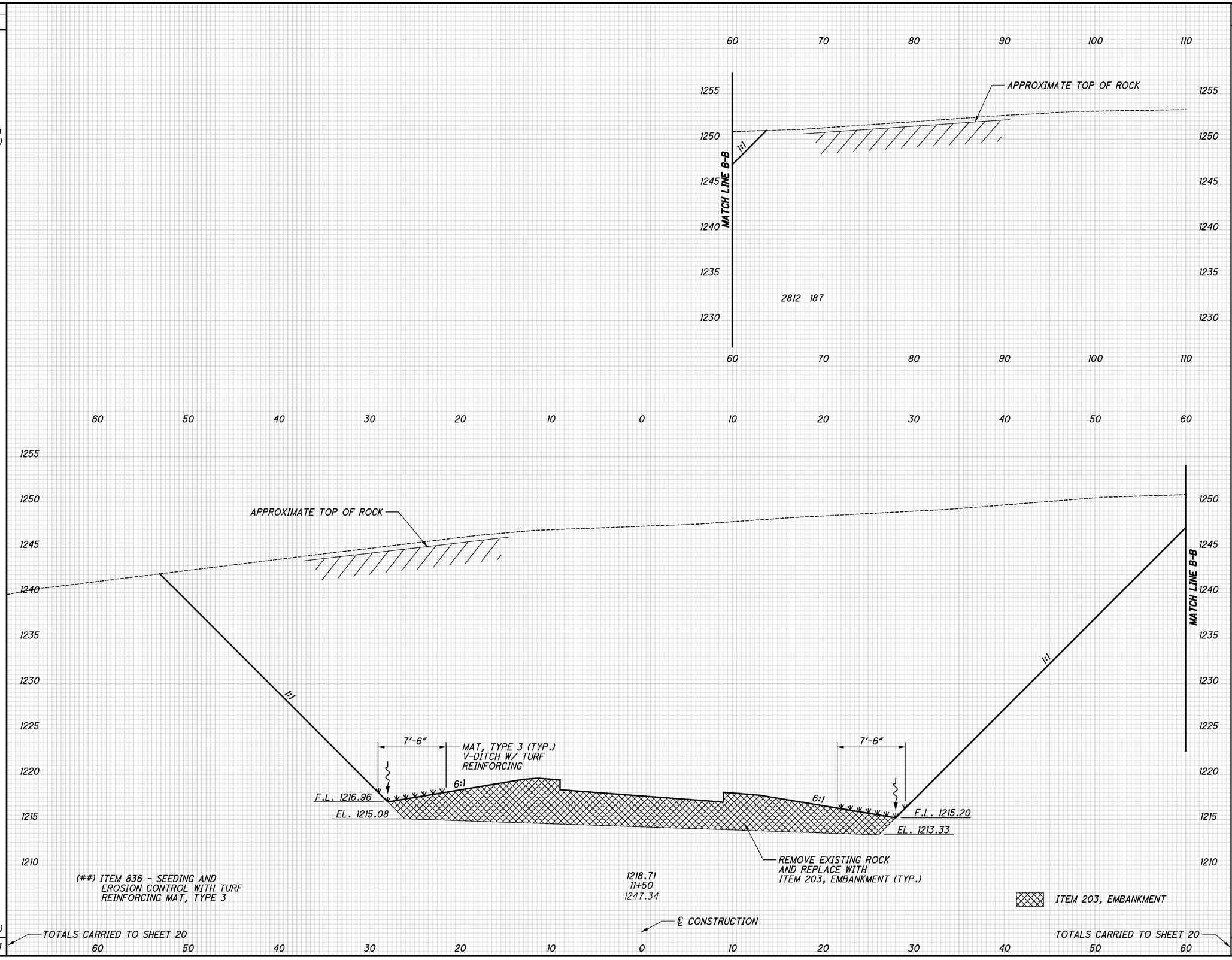
SEEDING	
END WIDTH	SQ. YDS.
	294 (83)
	25 (15)
	(83)
	294



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		5,784	347
2812	187		
		5,784	347

CALCULATED DTB
CHECKED SAH

CROSS SECTIONS RELOCATED TR 243
STA. 11+50.00

HAS-22-17.24

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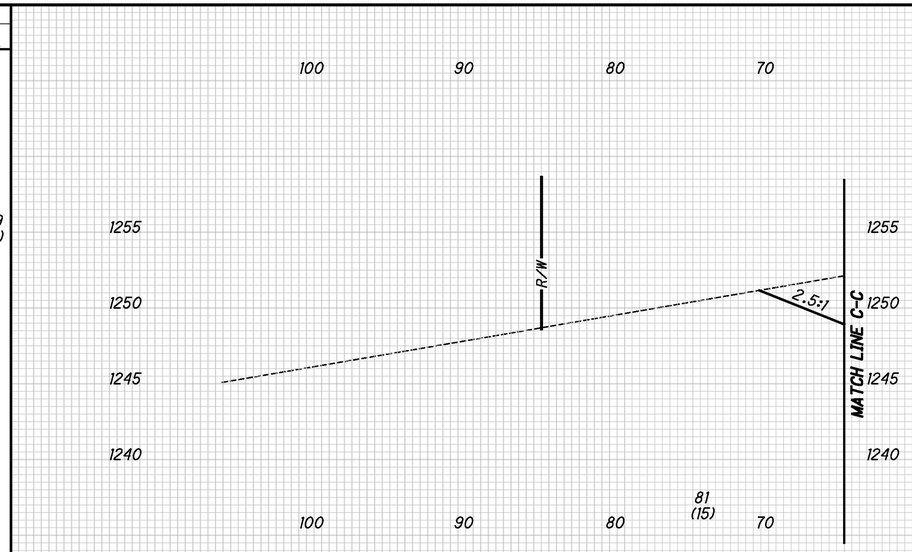
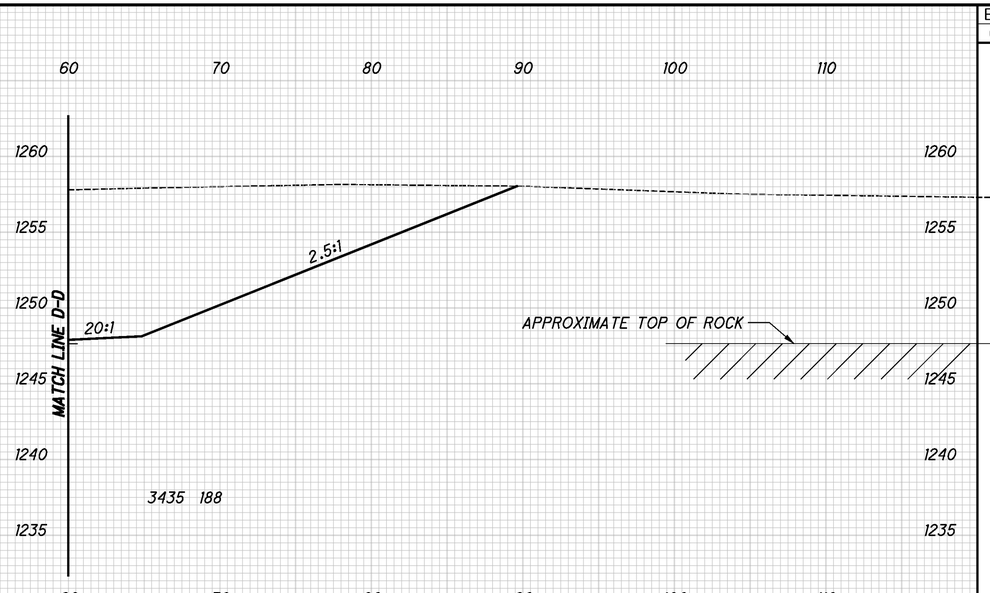
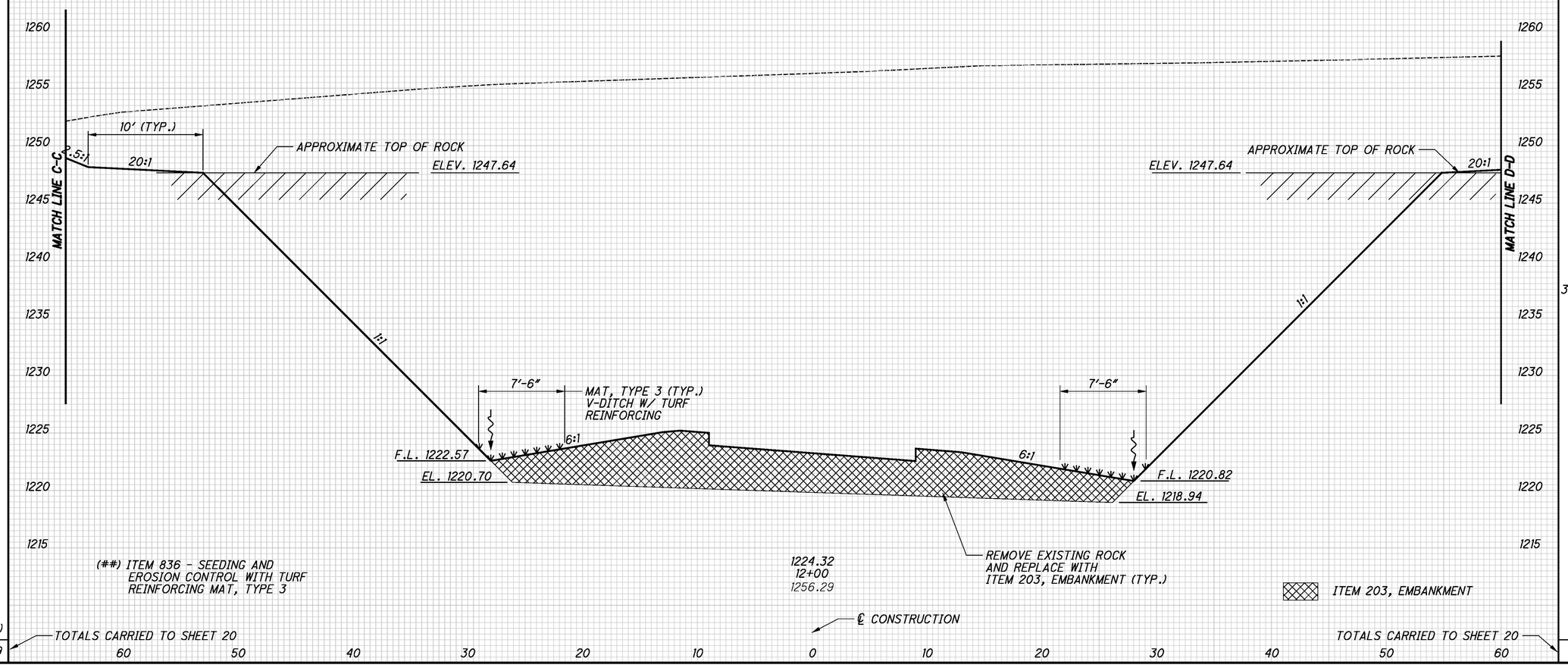
SEEDING	
END WIDTH	SQ. YDS.
	569 (83)
	81 (15)
	(83) 569







END AREA		VOLUME	
CUT	FILL	CUT	FILL
		6,906	348
	3435	188	
		6,906	348

CALCULATED DTB
CHECKED SAH

CROSS SECTIONS RELOCATED TR 243
STA. 12+00.00

HAS-22-17.24

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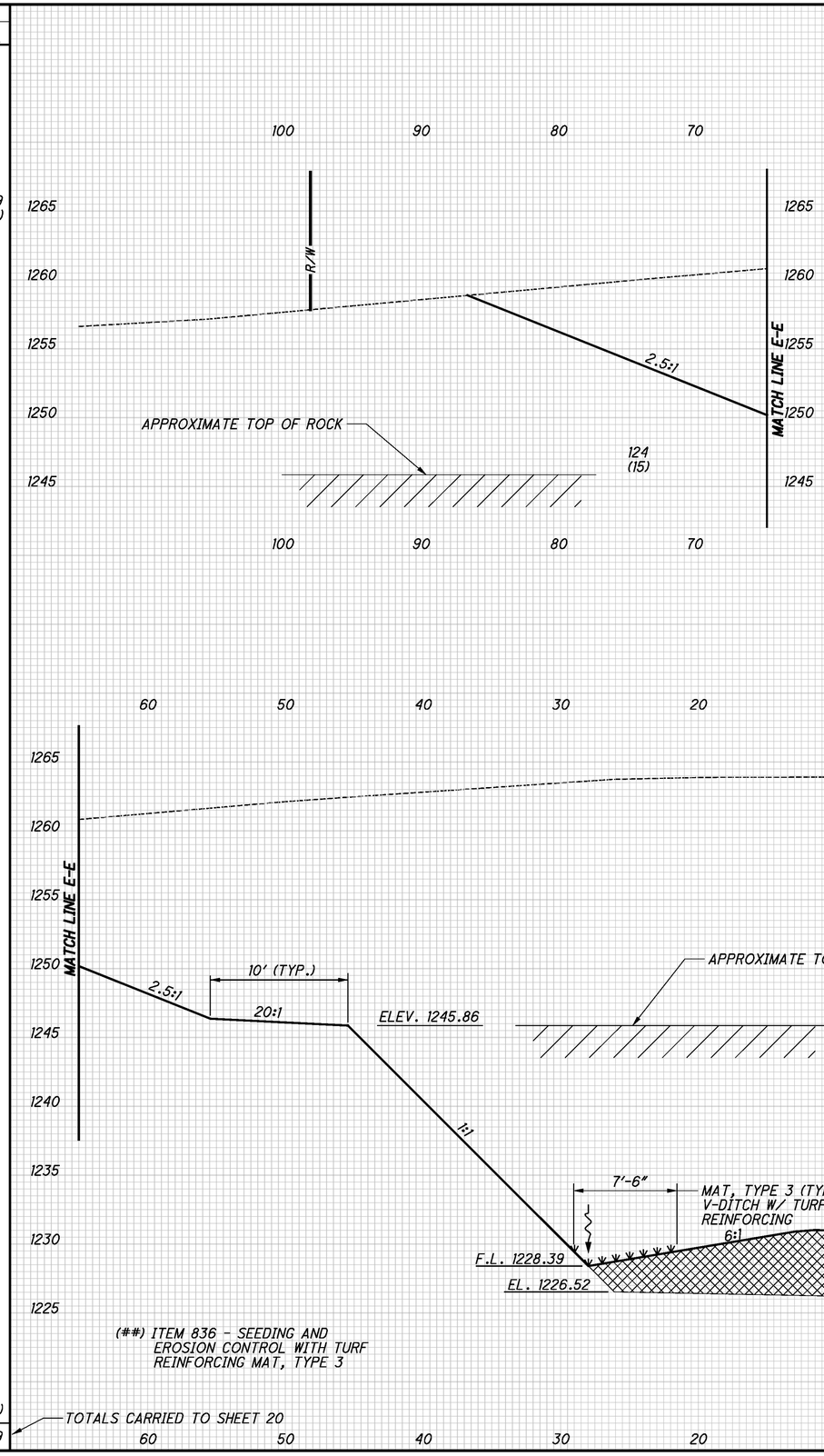
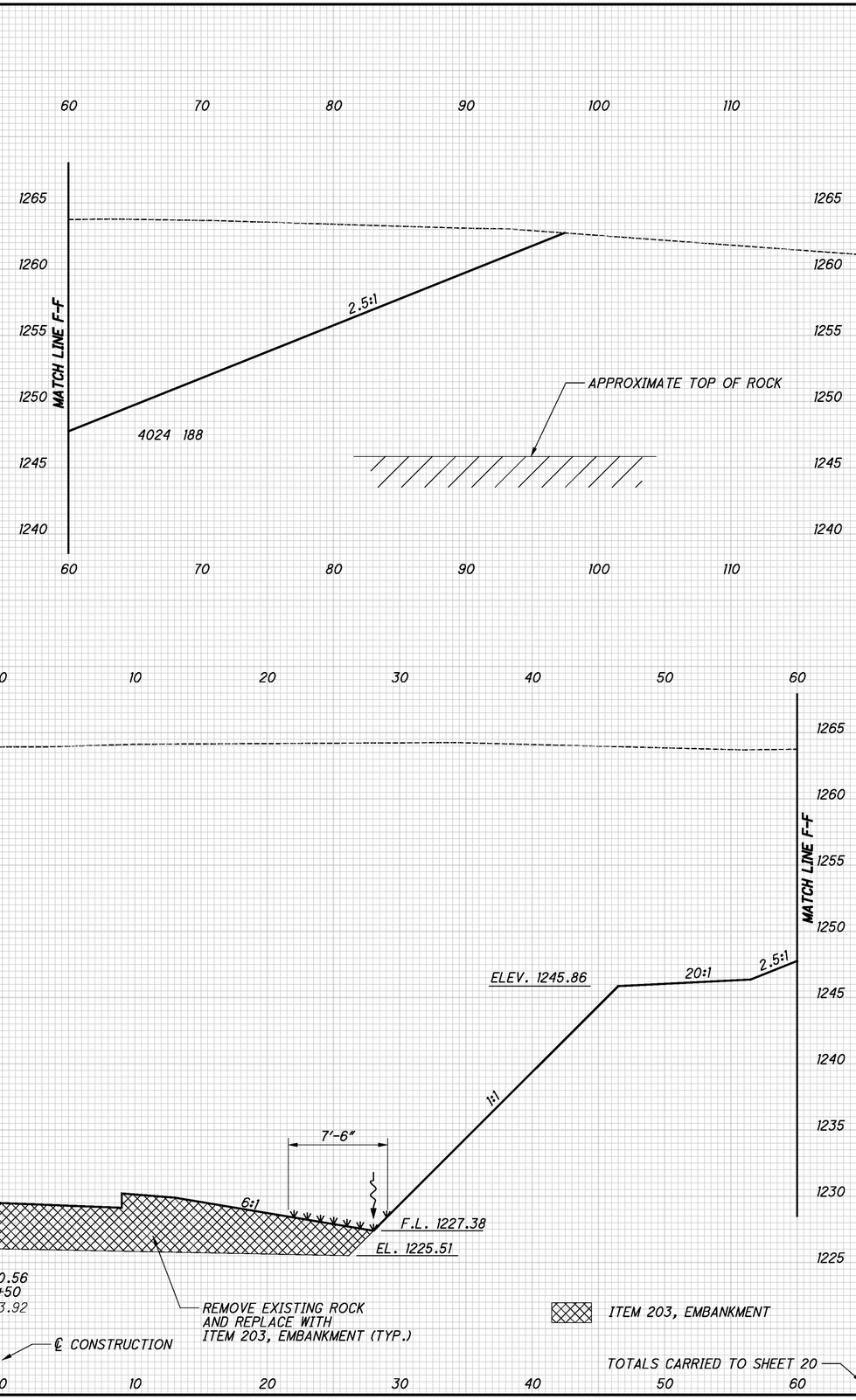
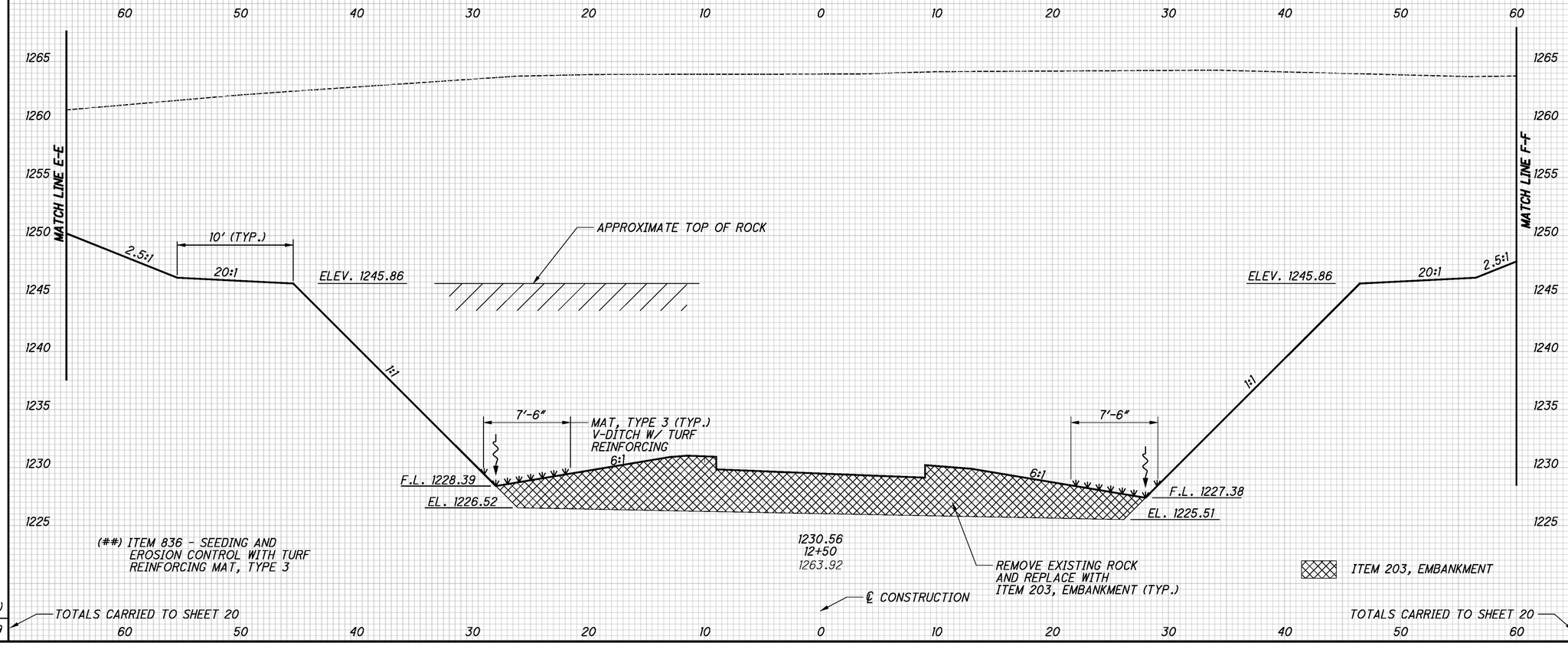
SEEDING	
END WIDTH	SQ. YDS.
	839 (83)
	124 (15)
	(83)
	839







END AREA		VOLUME	
CUT	FILL	CUT	FILL
		8,278	351
4024	188		
		8,278	351

CALCULATED DTB
CHECKED SAH

CROSS SECTIONS RELOCATED TR 243
STA. 12+50.00

HAS-22-17.24

25
51

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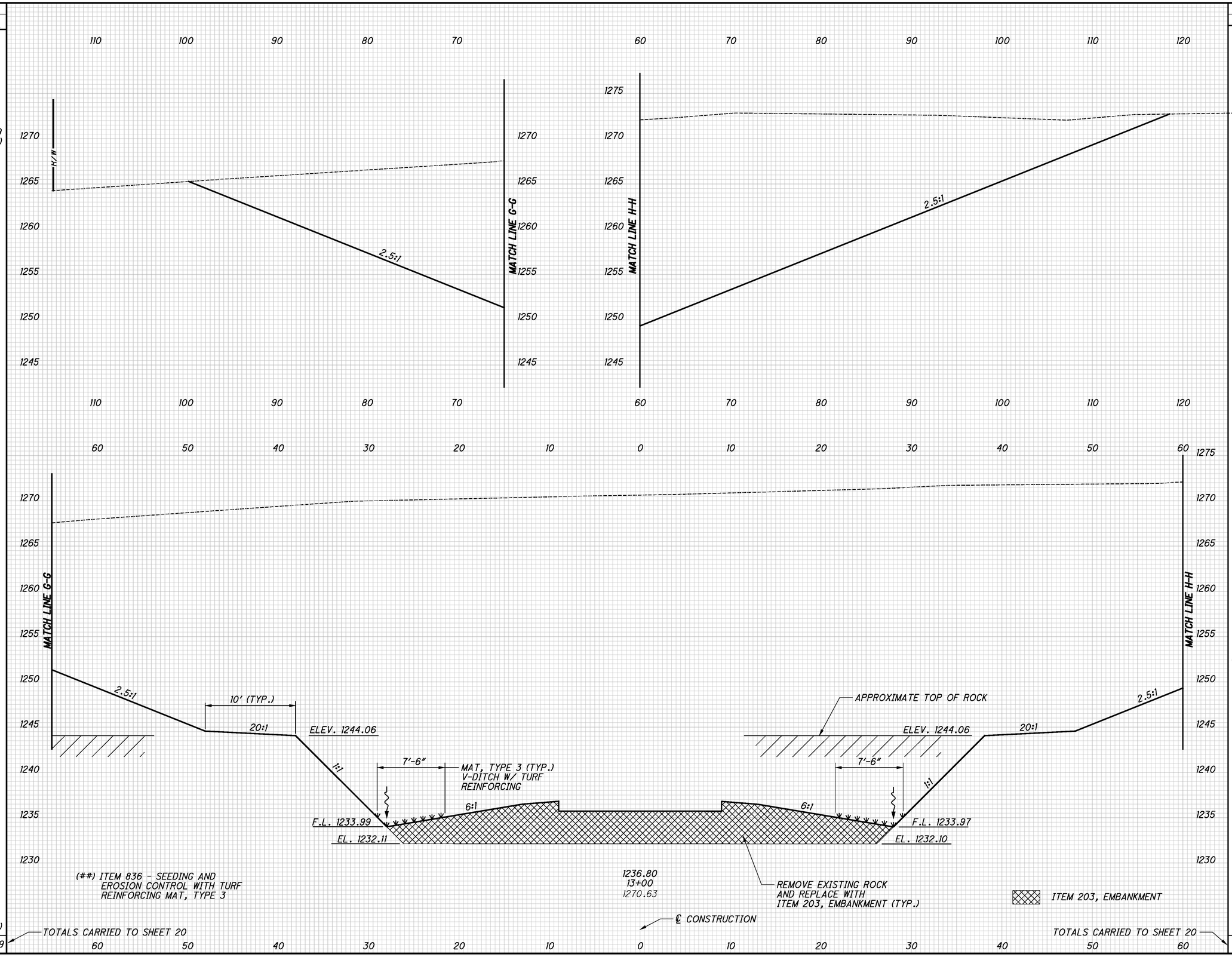
SEEDING	
END WIDTH	SQ. YDS.
	1219 (83)
	178 (15)
(83)	1,219



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		9,819	351
4916	191		
		9,819	351

CALCULATED DTB
CHECKED SAH

CROSS SECTIONS RELOCATED TR 243 STA. 13+00.00

HAS-22-17.24

26
51

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SEEDING	
END WIDTH	SQ. YDS.
	1331 (83)
	261 (15)
(83)	1,331

100 90 80 70 60 70 80 90 100 110 120 130

1280 1275 1270 1265 1260 1255

MATCH LINE I-I

MATCH LINE J-J

2.5:1

2.5:1

100 90 80 70 60 70 80 90 100 110 120 130

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

1280 1275 1270 1265 1260 1255 1250 1245 1240 1235

MATCH LINE I-I

MATCH LINE J-J

2.5:1

2.5:1

7'-6"

7'-6"

MAT, TYPE 3 (TYP.) V-DITCH W/ TURF REINFORCING

6:1

6:1

APPROXIMATE TOP OF ROCK

APPROXIMATE TOP OF ROCK

F.L. 1239.88

EL. 1238.00

F.L. 1240.86

EL. 1238.98

(##) ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3

1243.04
13+50
1277.42

℄ CONSTRUCTION

REMOVE EXISTING ROCK AND REPLACE WITH ITEM 203, EMBANKMENT (TYP.)

ITEM 203, EMBANKMENT

TOTALS CARRIED TO SHEET 20

TOTALS CARRIED TO SHEET 20

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

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		10,694	174
5688	188	10,694	174

CALCULATED DTB

CHECKED SAH

CROSS SECTIONS RELOCATED TR 243

STA. 13+50.00

HAS-22-17.24

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SEEDING	
END WIDTH	SQ. YDS.
1208 (83)	
218 (15)	
(83)	
1,208	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	EX LA	9,800 [16]	0 [7]
5862 [0]	0 [0]		
		[16]	[7]
		9,800	0

CALCULATED DTB
CHECKED SAH

CROSS SECTIONS RELOCATED TR 243 STA. 14+00.00

HAS-22-17.24

28
51

100 90 80 70 — 70 80 90 100 110 120

1285 1280 1275 1270 1265 1260 1255 — 1290 1285 1280 1275 1270 1265 1260

MATCH LINE K-K — MATCH LINE L-L

2.5:1

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

Ex R/W

1290 1285 1280 1275 1270 1265 1260 1255 1250 1245

MATCH LINE K-K — MATCH LINE L-L

2.5:1 — 2.5:1

7'-6" — 2' FLAT BOTTOM DITCH W/ TURF REINFORCING MAT, TYPE 3 (TYP.) — 7'-6"

6:1 — 6:1

F.L. 1245.79 — F.L. 1247.51

(##) ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3

APPROXIMATE TOP OF ROCK

1249.28
14+00
1284.71

℄ CONSTRUCTION

[##] ADDITIONAL ESTIMATED EMBANKMENT QUANTITIES TO CONSTRUCT AND REMOVE THE TEMPORARY ROAD FOR INFORMATION ONLY. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 615, ROADS FOR MAINTAINING TRAFFIC.

TOTALS CARRIED TO SHEET 20 — TOTALS CARRIED TO SHEET 20

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SEEDING	
END WIDTH	SQ. YDS.
	978 (83)
	217 (15)
(83)	
978	

110 100 90 80 70 60 70 80 90 100 110 120 130

1285 1280 1275 1270 1265

MATCH LINE M-M

MATCH LINE N-N

2.5:1

℄ TEMPORARY ROAD

12.5:1

2:1

F.L. 1280.92

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

Ex R/W

APPROXIMATE TOP OF ROCK

7'-6"

2' FLAT BOTTOM DITCH W/ TURF REINFORCING MAT, TYPE 3 (TYP.)

6:1

F.L. 1252.03

(##) ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3

1255.52
14+50
1289.95

℄ CONSTRUCTION

APPROXIMATE TOP OF ROCK

F.L. 1253.75

[##] ADDITIONAL ESTIMATED EMBANKMENT QUANTITIES TO CONSTRUCT AND REMOVE THE TEMPORARY ROAD FOR INFORMATION ONLY. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 615, ROADS FOR MAINTAINING TRAFFIC.

TOTALS CARRIED TO SHEET 20

TOTALS CARRIED TO SHEET 20

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		7,255 [32]	174 [16]
4723 [17]	0 [8]		
		[32]	[16]
		7,255	174

CALCULATED DTB

CHECKED SAH

SECTIONS RELOCATED TR 243
STA. 14+50.00
CROSS SECTIONS

HAS-22-17.24

29
51

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SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	433 (83)			3,393 [32]	348 [16]
85 (15)		2104 [18]	188 [9]		
	611 (83)			4,830 [33]	348 [17]
135 (15)		3112 [18]	188 [9]		
(166)				[65]	[33]
1,044				8,223	696

℄ TEMPORARY ROAD
Ex R/W
R/W
MATCH LINE Q-Q
20:1
APPROXIMATE TOP OF ROCK
ELEV. 1276.54
2.5:1
1:1
7′-6″
MAT, TYPE 3 (TYP.) V-DITCH W/ TURF REINFORCING
6:1
F.L. 1264.51
EL. 1262.64
F.L. 1266.23
EL. 1264.36
REMOVE EXISTING ROCK AND REPLACE WITH ITEM 203, EMBANKMENT (TYP.)
1268.00
15+50
1288.84
MATCH LINE O-O
MATCH LINE P-P
2:1
F.L. 1284.00
3112 188
[18] [9]
10′ (TYP.)
F.L. 1258.27
EL. 1256.40
F.L. 1260.00
EL. 1258.12
1261.76
15+00
1288.42
℄ CONSTRUCTION
ITEM 203, EMBANKMENT
(##) ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3
[##] ADDITIONAL ESTIMATED EMBANKMENT QUANTITIES TO CONSTRUCT AND REMOVE THE TEMPORARY ROAD FOR INFORMATION ONLY. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 615, ROADS FOR MAINTAINING TRAFFIC.
TOTALS CARRIED TO SHEET 20

CALCULATED DTB
CHECKED SAH

CROSS SECTIONS RELOCATED TR 243 STA. 15+00.00 TO STA. 15+50.00

HAS-22-17.24

30
51

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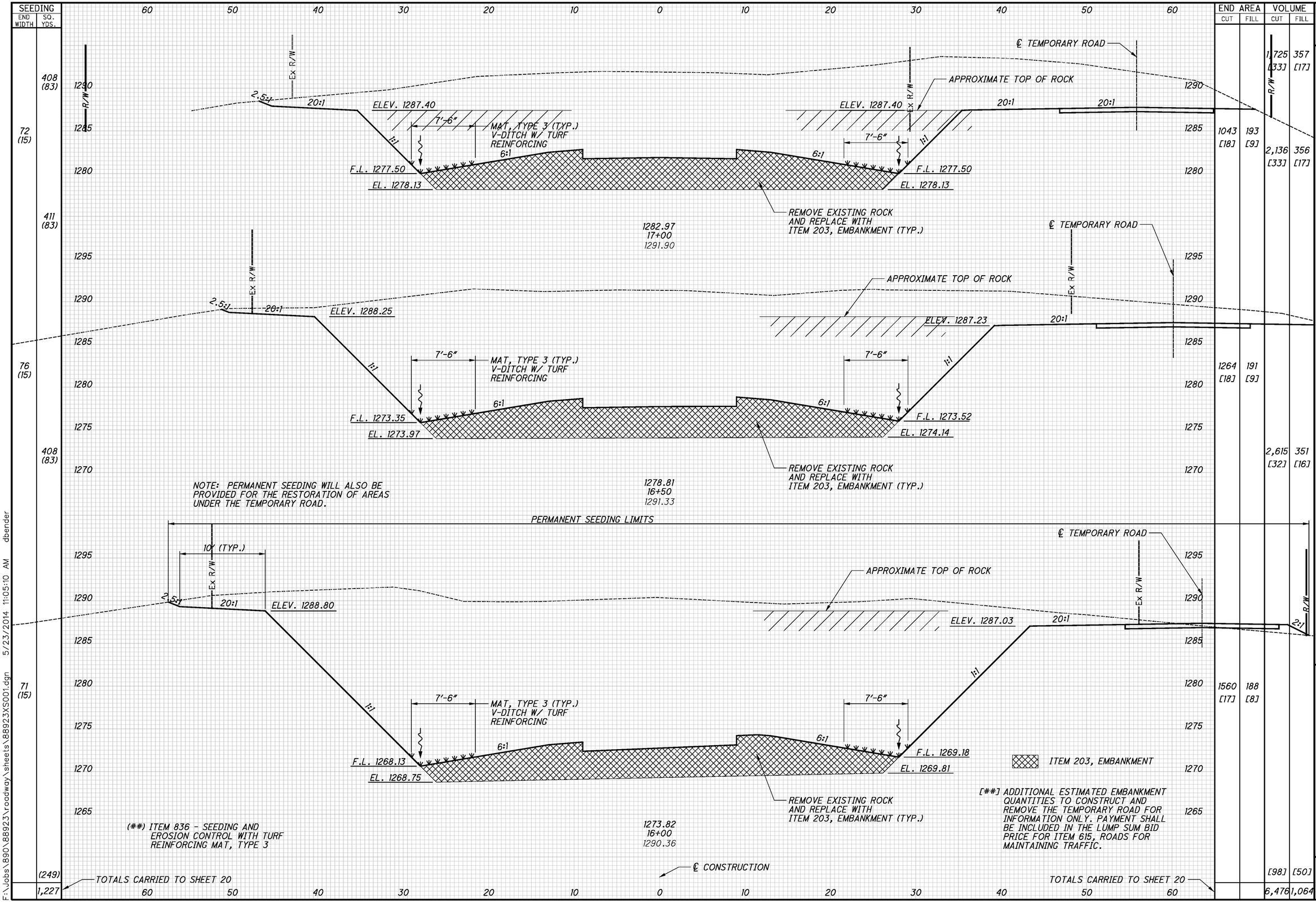
SEEDING END WIDTH	SEEDING SQ. YDS.
	408 (83)
72 (15)	
	411 (83)
76 (15)	
	408 (83)
71 (15)	
	(249)
	1,227



[##] ADDITIONAL ESTIMATED EMBANKMENT QUANTITIES TO CONSTRUCT AND REMOVE THE TEMPORARY ROAD FOR INFORMATION ONLY. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 615, ROADS FOR MAINTAINING TRAFFIC.

(##) ITEM 836 - SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3

TOTALS CARRIED TO SHEET 20

TOTALS CARRIED TO SHEET 20

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		1,725 [33]	357 [17]
1043 [18]	193 [9]		
		2,136 [33]	356 [17]
1264 [18]	191 [9]		
		2,615 [32]	351 [16]
1560 [17]	188 [8]		
		[98]	[50]
		6,476	1,064

CALCULATED DTB
CHECKED SAH

CROSS SECTIONS RELOCATED TR 243
STA. 16+00.00 TO STA. 17+00.00

HAS-22-17.24

31
51

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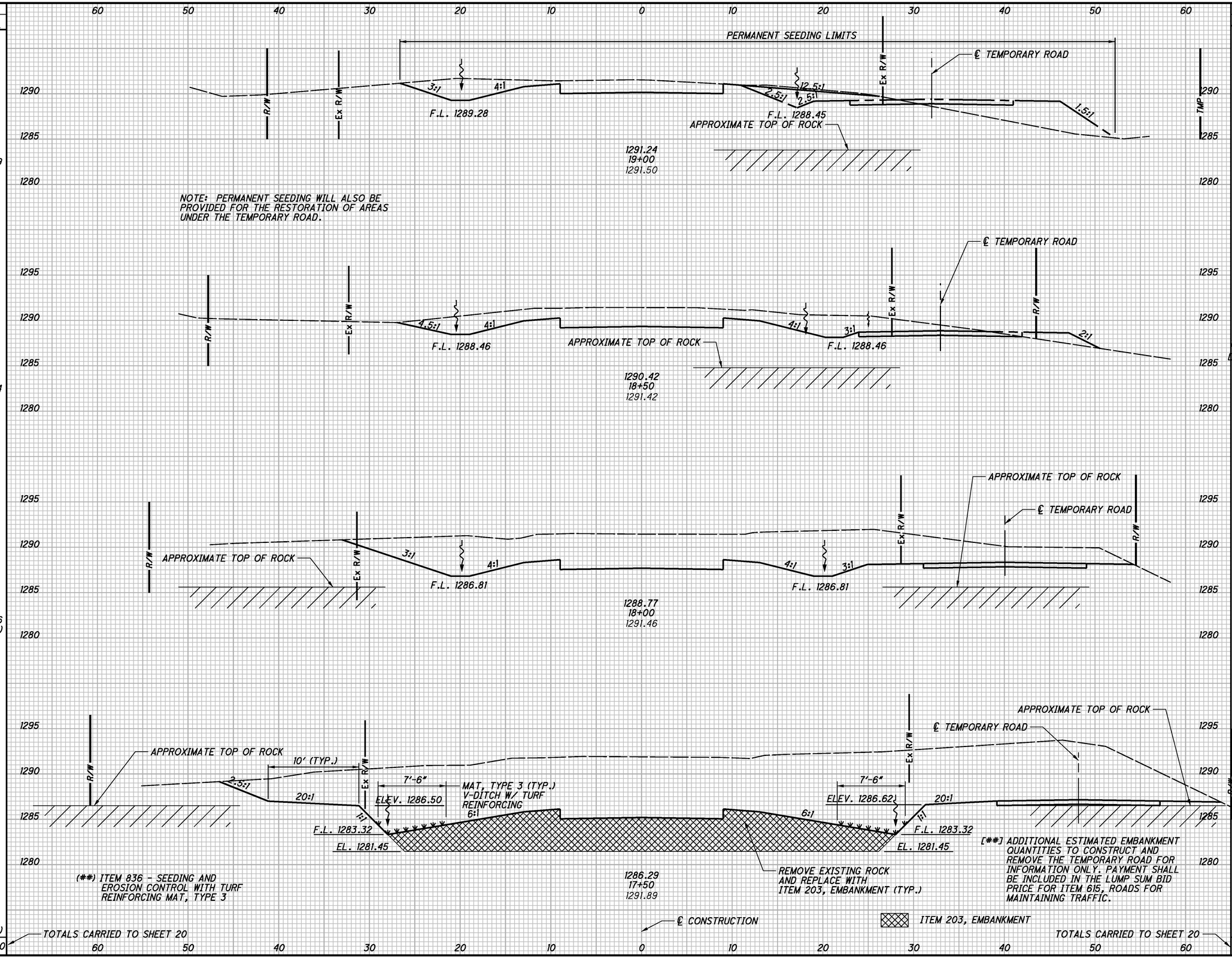
SEEDING END WIDTH	SEEDING SQ. YDS.
	171
62	
	339
60	
	364
71 (O)AH (15)BK	
	406 (83)
75 (15)	
	(83)
	1,280



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		40 [58]	1 [50]
49 [62]	0 [53]		
		140 [79]	0 [62]
102 [23]	0 [14]		
		341 [38]	0 [21]
266 [18]	0 [9]		
		1,006 [17]	179 [8]
820 [18]	193 [9]		
		[192]	[141]
		1,526	180

CALCULATED DTB
CHECKED SAH

CROSS SECTIONS RELOCATED TR 243
STA. 17+50.00 TO TA. 19+00.00

HAS-22-17.24

32
51

09-FEB-2015 9:02AM cwarner
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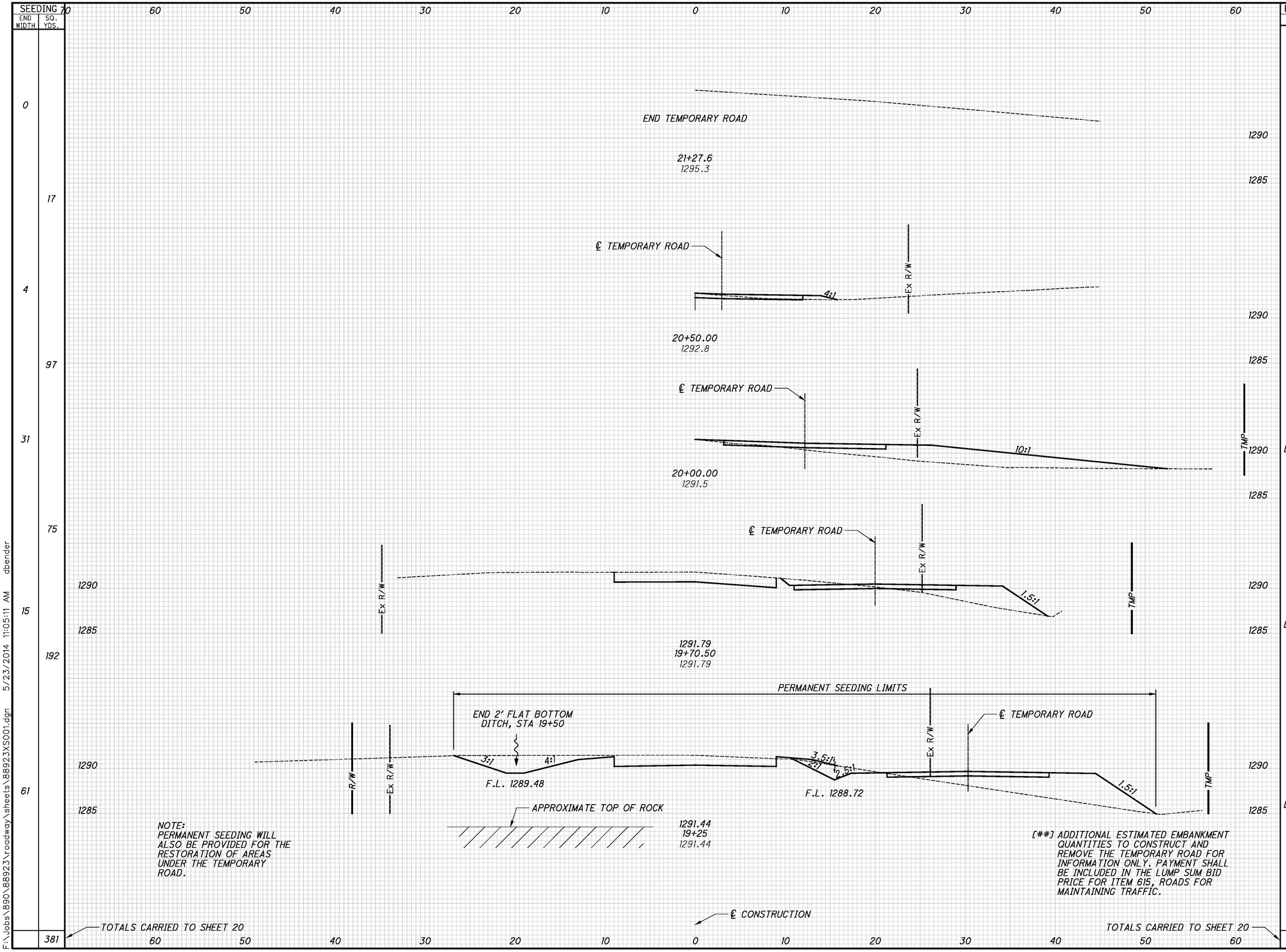
SEEDING END WIDTH	SEEDING SQ. YDS.
0	
	17
4	
	97
31	
	75
15	
	192
61	
	381



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
[0]	[0]		
		[10]	[1]
[7]	[1]		
		[57]	[131]
[55]	[46]		
		[50]	[40]
20 [36]	0 [27]		
		48 [83]	1 [68]
37 [63]	1 [54]		
		[200]	[240]
		48	1

CALCULATED DTB
CHECKED SAH

CROSS SECTIONS RELOCATED TR 243
STA. 19+25.00 TO STA. 21+27.60

HAS-22-17.24

33
51

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SUPERELEVATION TABLE

P.I. STA. 11+84.08 | Dc = 30° 58′ 14″

LEFT SIDE					CENTERLINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
1212.69		-0.75	-0.083	9.00	10+00.00	1213.44	9.00	0.080	0.72		1214.16	
1212.87	51.4:1	-0.26	-0.029	9.00	10+25.00	1213.13	9.00	0.041	0.37	71.8:1	1213.50	
1212.98		-0.14	-0.016	9.00	10+31.00	1213.12	9.00	0.032	0.29		1213.41	
1213.26		-0.01	-0.001	9.00	10+50.00	1213.27	9.00	0.003	0.02		1213.29	
1213.29		0.00	0.000	9.00	10+51.71	1213.29	9.00	0.000	0.00		1213.29	R.C.
1214.05		0.16	0.018	9.00	10+75.00	1213.89	9.00	-0.018	-0.16		1213.73	
1215.35	143.7:1	0.34	0.037	9.00	11+00.00	1215.01	9.00	-0.037	-0.34	143.7:1	1214.67	
1215.92		0.40	0.044	9.00	11+08.83	1215.52	9.00	-0.044	-0.40		1215.12	P.C.
1217.12		0.51	0.057	9.00	11+25.00	1216.61	9.00	-0.057	-0.51		1216.10	
1219.39		0.68	0.076	9.00	11+50.00	1218.71	9.00	-0.076	-0.68		1218.03	F.S.
1221.97		0.68	0.076	9.00	11+75.00	1221.29	9.00	-0.076	-0.68		1220.61	
1225.00		0.68	0.076	9.00	12+00.00	1224.32	9.00	-0.076	-0.68		1223.64	
1225.37		0.68	0.076	9.00	12+03.00	1224.69	9.00	-0.076	-0.68		1224.01	F.S.
1227.97		0.53	0.059	9.00	12+25.00	1227.44	9.00	-0.059	-0.53		1226.91	
1230.92		0.36	0.040	9.00	12+50.00	1230.56	9.00	-0.040	-0.36		1230.20	
1231.12	143:1	0.34	0.038	9.00	12+51.77	1230.78	9.00	-0.038	-0.34	143:1	1230.44	P.T.
1233.86		0.18	0.020	9.00	12+75.00	1233.68	9.00	-0.020	-0.18		1233.50	
1236.81		0.01	0.001	9.00	13+00.00	1236.80	9.00	-0.001	-0.01		1236.79	
1236.90		0.00	0.000	9.00	13+00.79	1236.90	9.00	0.000	0.00		1236.90	R.C.

SUPERELEVATION TABLE

P.I. STA. 14+59.00 | Dc = 28° 38′ 52″

LEFT SIDE					CENTERLINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
1236.90		0.00	0.000	9.00	13+00.79	1236.90	9.00	0.000	0.00		1236.90	R.C.
1239.75		-0.17	-0.019	9.00	13+25.00	1239.92	9.00	0.019	0.17		1240.09	
1242.49	143:1	-0.33	-0.037	9.00	13+48.23	1242.82	9.00	0.037	0.33	143.0:1	1243.15	P.C.
1242.70		-0.34	-0.038	9.00	13+50.00	1243.04	9.00	0.038	0.34		1243.38	
1245.64		-0.52	-0.058	9.00	13+75.00	1246.16	9.00	0.058	0.52		1246.68	
1248.11		-0.67	-0.074	9.00	13+96.00	1248.78	9.00	0.074	0.67		1249.45	F.S.
1248.61		-0.67	-0.074	9.00	14+00.00	1249.28	9.00	0.074	0.67		1249.95	
1251.73		-0.67	-0.074	9.00	14+25.00	1252.40	9.00	0.074	0.67		1253.07	
1254.85		-0.67	-0.074	9.00	14+50.00	1255.52	9.00	0.074	0.67		1256.19	
1257.97		-0.67	-0.074	9.00	14+75.00	1258.64	9.00	0.074	0.67		1259.31	
1261.09		-0.67	-0.074	9.00	15+00.00	1261.76	9.00	0.074	0.67		1262.43	
1264.21		-0.67	-0.074	9.00	15+25.00	1264.88	9.00	0.074	0.67		1265.55	
1267.33		-0.67	-0.074	9.00	15+50.00	1268.00	9.00	0.074	0.67		1268.67	
1268.32		-0.67	-0.074	9.00	15+58.00	1268.99	9.00	0.074	0.67		1269.66	F.S.
1270.47		-0.55	-0.061	9.00	15+75.00	1271.02	9.00	0.061	0.55		1271.57	
1273.44		-0.38	-0.042	9.00	16+00.00	1273.82	9.00	0.042	0.38		1274.20	
1273.62	144.4:1	-0.36	-0.041	9.00	16+01.47	1273.98	9.00	0.041	0.36		1274.34	P.T.
1276.22		-0.20	-0.022	9.00	16+25.00	1276.42	9.00	0.022	0.20		1276.62	
1277.11		-0.14	-0.016	9.00	16+33.40	1277.25	9.00	0.016	0.14	144.4:1	1277.39	
1278.67		-0.14	-0.016	9.00	16+50.00	1278.81	9.00	0.003	0.03		1278.84	
1279.05		-0.14	-0.016	9.00	16+54.21	1279.19	9.00	0.000	0.00		1279.19	
1280.85		-0.14	-0.016	9.00	16+75.00	1280.99	9.00	-0.016	-0.14		1280.85	N.C.

CALCULATED ARP
CHECKED DTB

SUPERELEVATION TABLE
RELOCATED T.R. 243

HAS-22-17.24

34
51

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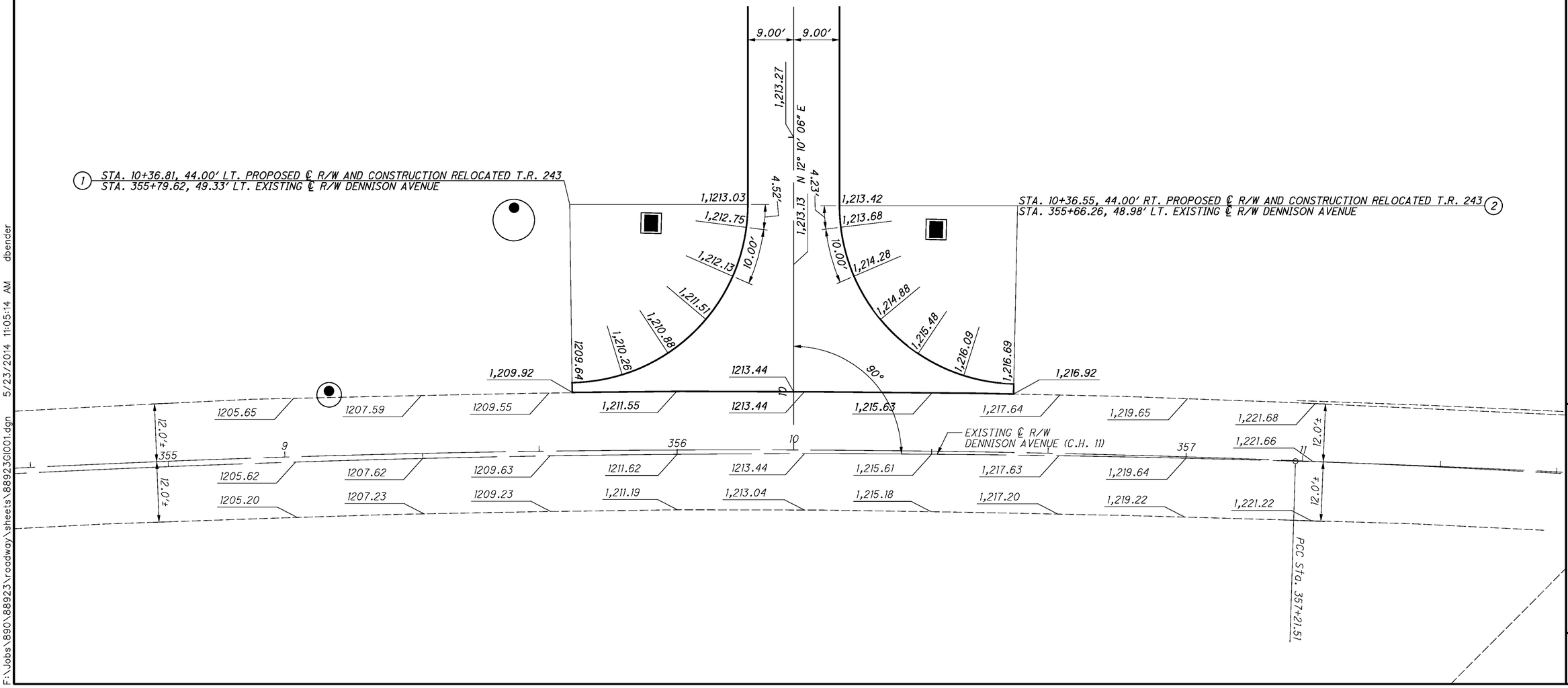
CURVE NO.	RADIUS	INTERIOR ANGLE	TANGENT	EXTERNAL	LENGTH OF CURVE	CHORD	CHORD BEARING
1	35.00′	89° 15′ 21″	34.54′	14.18′	54.52′	49.17′	N 56 47′ 47″ E
2	35.00′	88° 46′ 28″	34.26′	13.98′	54.23′	48.97′	N 32 13′ 08″ W



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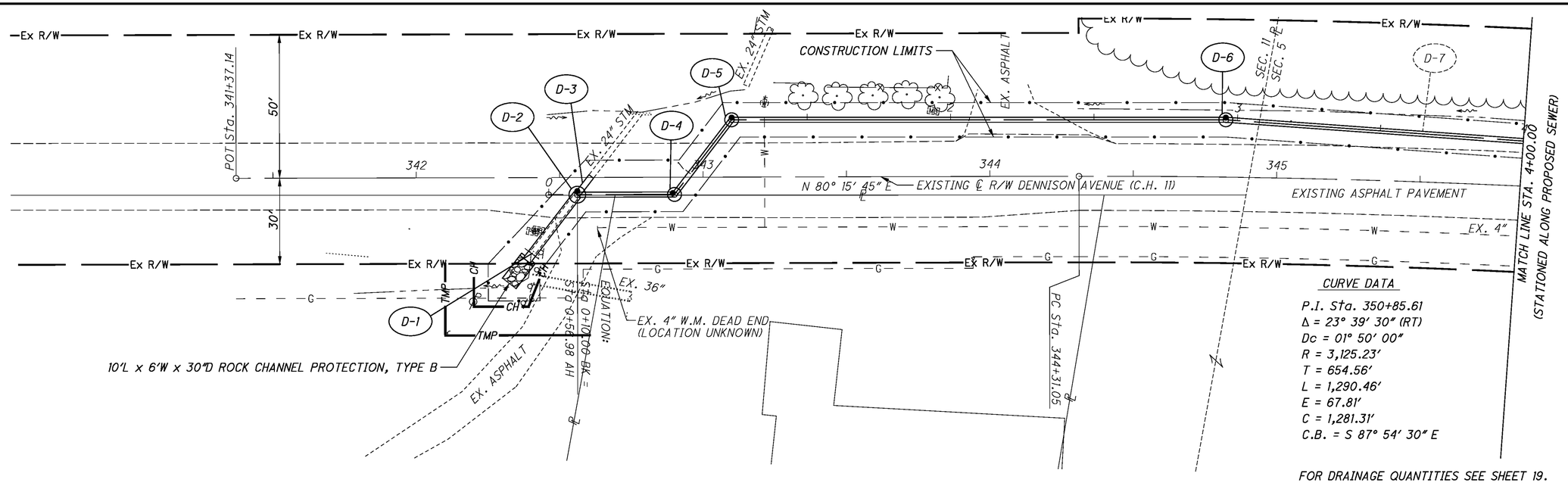
N

0 5 10 20
HORIZONTAL SCALE IN FEET

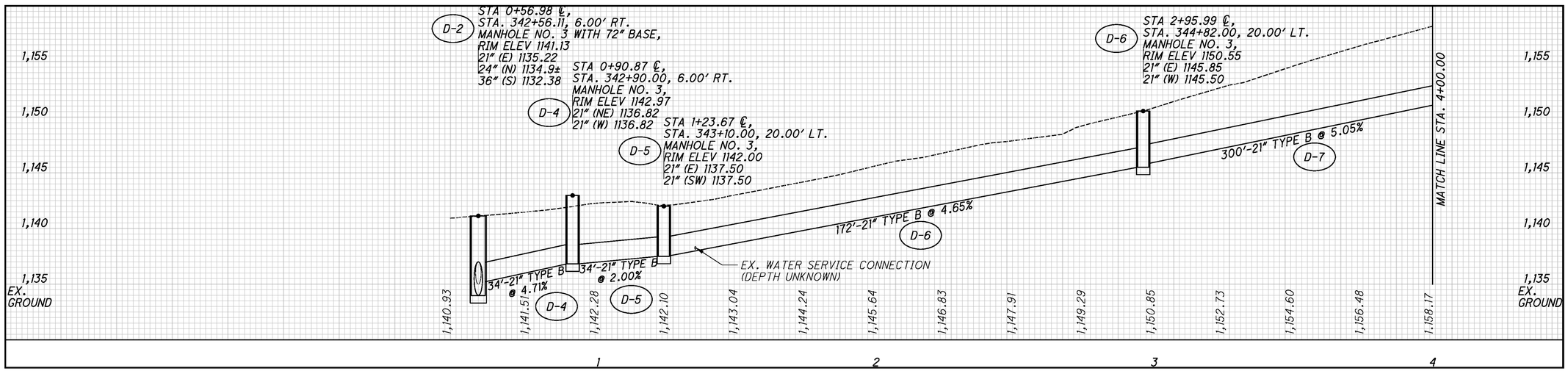
CALCULATED MRC
CHECKED DTB

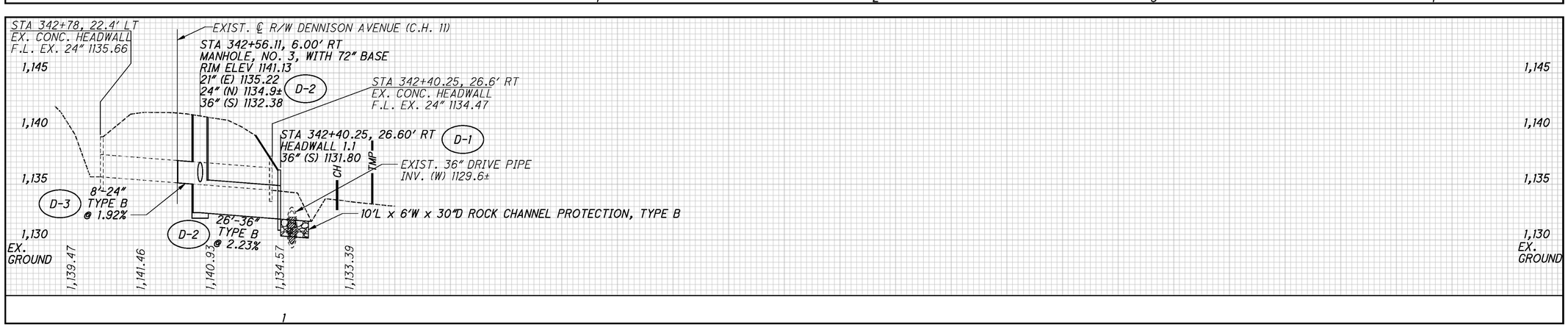
INTERSECTION DETAIL
RELOCATED T.R. 243 AND DENNISON AVENUE

HAS-22-17.24



FOR DRAINAGE QUANTITIES SEE SHEET 19.





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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MRC
CHECKED ARP

PLAN AND PROFILE STORM SEWER

HAS-22-17.24

D-7
D-8
D-9
Ex R/W
CONSTRUCTION LIMITS
50'
40'
30'
EX. 4"
EX. 15"
EXISTING ASPHALT PAVEMENT
EXISTING ℄ R/W DENNISON AVENUE (C.H. 11)
EX. 4"
EX. 2"
TO PUMP STATION
SAN
MATCH LINE STA. 4+00.00 (STATIONING ALONG PROPOSED SEWER)
MATCH LINE STA. 9+60.00 (STATIONING ALONG PROPOSED SEWER)
346
347
348
349
350
351
5
6
7
8
9
℄
W
G
E

CURVE DATA

P.I. Sta. 350+85.61
Δ = 23° 39′ 30″ (RT)
Dc = 01° 50′ 00″
R = 3,125.23′
T = 654.56′
L = 1,290.46′
E = 67.81′
C = 1,281.31′
C.B. = S 87° 54′ 30″ E

FOR DRAINAGE QUANTITIES SEE SHEET 19.

EX. GROUND ABOVE SEWER
EXIST. 2" SANITARY FORCE MAIN (EXACT DEPTH UNKNOWN)
EXIST. WATER SERVICE LATERAL (DEPTH UNKNOWN)
EXIST. 15" CULVERT

D-7 STA 5+95.66 ℄, STA. 347+80.00, 17.00′ LT.
MANHOLE NO. 3,
RIM ELEV 1171.23
21" (E) 1166.10
21" (W) 1161.00

D-8 STA 8+95.00 ℄, STA. 350+78.00, 13.00′ LT.
MANHOLE NO. 3,
RIM ELEV 1187.30
21" (E) 1181.05
21" (W) 1181.05

300′-21" TYPE B @ 5.05%
299′-21" TYPE B @ 5.00%
298′-21" TYPE B @ 2.30%

1,185
1,180
1,175
1,170
1,165
1,160
1,155
1,150

1,158.17 1,159.99 1,161.84 1,163.62 1,165.33 1,166.75 1,168.32 1,170.14 1,171.64 1,174.04 1,175.54 1,177.64 1,179.10 1,180.47 1,181.74 1,182.93 1,184.05 1,185.04 1,185.94 1,186.75 1,187.44 1,188.06 1,188.56

4 5 6 7 8 9

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED MRC
CHECKED ARP

PLAN AND PROFILE
STORM SEWER

HAS-22-17.24

37
51

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EXISTING POND
TO BE AVOIDED

EX. ASPHALT

EX. 12" STM

D-9

EX. 12" STM

EX. 12" STM

EX. 2"

Ex R/W

EXISTING ASPHALT PAVEMENT

EX. 4"

EX. 2"

EX. 24" STM

MATCH LINE STA. 9+60.00
(STATIONING ALONG PROPOSED SEWER)

EX. GRAVEL

EX. GRAVEL

EX. 24" STM

EX. 24" STM

EX. 24" STM

RESERVED AREA FOR MANUFACTURED
WATER QUALITY STRUCTURE, TYPE 1
20' (TOTAL) - 12" TYPE B

WQ-1

D-10

D-11

D-12

D-13

EXISTING INDIANA
BAT TREE

Ex R/W

Ex LA

EX. 2"

EX. 4"

EX. 3"

EXISTING ℄ R/W DENNISON AVENUE (C.H. 11)

CONSTRUCTION LIMITS

STA. 9+87.83, PROPOSED ℄ R/W AND
CONSTRUCTION RELOCATED T.R. 243=
STA. 356+22.89, EXISTING ℄ R/W
DENNISON AVENUE (CH. 11)

CURVE DATA

P.I. Sta. 350+85.61
Δ = 23° 39' 30" (RT)
Dc = 01° 50' 00"
R = 3,125.23'
T = 654.56'
L = 1,290.46'
E = 67.81'
C = 1,281.31'
C.B. = S 87° 54' 30" E

Ex U

EX. 24" STM

EX. 30" CULVERT

FOR DRAINAGE QUANTITIES SEE SHEET 19.

WQ-1 STA 14+00.71 ℄,
STA. 355+68.75, 46.45' LT.,
MANHOLE NO. 3 WITH 84"
BASE I.D. AND 6" DIVERSION WEIR,
RIM ELEV 1213.84
12" (NE) 1202.36
12" (NW) 1202.34
21" (E) 1202.36
21" (SW) 1199.80

D-12 STA 14+27.70 ℄,
STA. 355+95.33, 45.46' LT.
CATCH BASIN NO. 8
GRATE ELEV 1209.90
18" (E) 1203.88
21" (W) 1203.63

℄ RELOC. T.R. 243

D-10 STA 13+50.76 ℄,
STA. 355+32.00, 13.00' LT.
MANHOLE NO. 3,
RIM ELEV 1206.20
21" (NE) 1198.60
21" (W) 1198.60

EXIST. 2" SANITARY
FORCE MAIN
(EXACT DEPTH UNKNOWN)

D-9 STA 11+93.13 ℄,
STA. 353+75.00, 13.00' LT.
MANHOLE NO. 3,
RIM ELEV 1195.50
21" (E) 1190.10
21" (W) 1187.90

EX. GROUND
ABOVE SEWER

EX. 24" STM

298'-21" TYPE B @ 2.30%

158'-21" TYPE B @ 5.38%

50'-21" TYPE C
@ 2.4%

27'-21"
TYPE C
@ 4.70%

56'-18" TYPE B @ 2.00%

STA 14+83.72, ℄=
STA. 356+50.54, 44.15' LT.
CATCH BASIN NO. 8,
GRATE ELEV 1211.20
18" (W) 1205.00

1,220
1,215
1,210
1,205
1,200
1,195
1,190
1,185

1,188.94 1,189.27 1,189.51 1,189.79 1,190.22 1,190.88 1,191.83 1,193.59 1,194.66 1,195.86 1,197.21 1,198.76 1,200.44 1,202.25 1,204.19 1,206.12 1,205.20 1,213.46 1,216.44 1,219.81 1,221.34

10 11 12 13 14 15

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MRC
CHECKED ARP

PLAN AND PROFILE
STORM SEWER

HAS-22-17.24

38
51

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BILLBOARD TO BE REMOVED BY OTHERS

EXIT NOW PLAY LAND

N 16° 06' 43" W

T.R. 243

PT Sta. 15+56.38

PT Sta. 16+01.47

PC Sta. 13+48.23

PC Sta. 12+74.51

PT Sta. 12+51.77

PC Sta. 11+08.83

N 56° 26' 09" E

N 12° 10' 06" E

N 55° 26' 49" E

HESFORD RD. D3-36

DENNISON AVE. D3-36

HESFORD ROAD

DENNISON AVENUE (C.H. 11)

U.S. 22

386.40'

W1-8R-18 STA.12+20 (S-6)

W1-8L-18 STA.11+60 (S-5)

W1-8R-18 STA.11+80 (S-4)

W1-8L-18 STA.12+20 (S-7)

W1-8R-18 STA.13+75 (S-9)

W1-8L-18 STA.13+75 (S-8)

W1-8R-18 STA.14+50 (S-11)

W1-8L-18 STA.14+50 (S-10)

W1-8R-18 STA.15+25 (S-13)

W1-8L-18 STA.15+25 (S-12)

W1-3R-30 (S-15)

W13-1P-18 STA.15+05 (S-16)

25 MPH

W3-1-30 STA.15+75 (S-14)

W1-7A-30 STA.19+50 (S-18)

12 %

ROAD WORK AHEAD (S-17) STA. 18+85

CADIZ 243 TWP (S-25) HESFORD ROAD STA. 12+65

TRUCK (S-23) TO ONCOMING TRAFFIC *STA. 10+10

*STA. 12+48 (S-24)

OM1-2-18 *STA. 9+52 (S-22)

*STA. 9+35 (S-21)

ROAD WORK AHEAD (S-20) *STA. 7+85

NO OUTLET W14-2-24 *STA. 7+65 (S-19)

NO WORK STOP HESFORD ROAD

STOP R1-1-30 STA.10+10 (S-1) SL-1

W1-7-48 STA. 356+15 (S-26)

STA.10+10

EL-1 EL-2 CL-1

LEGEND

EL - ITEM 642, EDGE LINE, 4" (WHITE)
CL - ITEM 642, CENTER LINE (SOLID DOUBLE)
SL - ITEM 642, STOP LINE

* STATIONING ESTABLISHED FROM EXISTING ℄ CONSTRUCTION T.R. 243.

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED MRC CHECKED JEN

TRAFFIC CONTROL PLAN T.R. 243

HAS-22-17.24

39 51

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SIGNING AND PAVEMENT MARKING SUBSUMMARY

CALCULATED JEN | CHECKED DTB

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 STREET NAME SIGN SUPPORT, NO. 3 POST FT	630 SIGN POST REFLECTOR EACH	630 SIGN, FLAT SHEET SQ FT	630 SIGN, DOUBLE FACED, STREET NAME EACH		630 REMOVAL OF GROUND MOUNTED SIGN AND STORAGE EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH			646 EDGE LINE, 4 INCH FT	646 CENTER LINE FT	646 STOP LINE FT
39	S-1	T.R. 243	10+10	LT.	R1-1-30	30X30		13.0		1	6.25									
39	S-2	T.R. 243	10+10	RT.	D3	36X8			11.5			1								
39	S-3	T.R. 243	10+10	RT.	D3	36X8						1								
39	S-4	T.R. 243	11+80	LT.	W1-8R-18	18X24	12.5				3.00									
39	S-5	T.R. 243	11+80	LT.	W1-8L-18	18X24	12.5				3.00									
39	S-6	T.R. 243	12+20	LT.	W1-8R-18	18X24	12.5				3.00									
39	S-7	T.R. 243	12+20	LT.	W1-8L-18	18X24	12.5				3.00									
39	S-8	T.R. 243	13+75	RT.	W1-8L-18	18X24	12.5				3.00									
39	S-9	T.R. 243	13+75	RT.	W1-8R-18	18X24	12.5				3.00									
39	S-10	T.R. 243	14+50	RT.	W1-8L-18	18X24	12.5				3.00									
39	S-11	T.R. 243	14+50	RT.	W1-8R-18	18X24	12.5				3.00									
39	S-12	T.R. 243	15+25	RT.	W1-8L-18	18X24	12.5				3.00									
39	S-13	T.R. 243	15+25	RT.	W1-8R-18	18X24	12.5				3.00									
39	S-14	T.R. 243	15+75	RT.	W3-1-30	30X30		14.0			6.25									
39	S-15	T.R. 243	16+05	RT.	W1-3R-30	30X30		15.5			6.25									
39	S-16	T.R. 243	16+05	RT.	W13-1P-18	18X18					2.25									
39	S-17	T.R. 243	18+85	LT.										1	1					
39	S-18	T.R. 243	19+50	LT.	W7-1A-30	30X30		14.0			6.25									
39	S-19	HESFORD ROAD	7+65	RT.	W14-2-24	24X24	13.5				4.00									
39	S-20	HESFORD ROAD	7+85	RT.										1	1					
39	S-21	HESFORD ROAD	9+35	RT.										1	1					
39	S-22	HESFORD ROAD	9+52	RT.	OM1-2-18	18X18	12.5				2.25									
39	S-23	HESFORD ROAD	10+10	RT.										2	1					
39	S-24	HESFORD ROAD	12+48	LT										1	1					
39	S-25	HESFORD ROAD	12+65	RT.										3	1					
39	S-26	C.R. 11	356+15	LT.	W1-7-48	48X24	12.5-12.5				8.00									

			FROM	TO																
39	EL-1	T.R. 243	10+00	19+71	LT.													985		
39	EL-2	T.R. 243	10+00	19+71	RT.													985		
39	CL-1	T.R. 243	10+10	19+71	℄														961	
39	SL-1	T.R. 243	10+10	-	LT.															21
		TOTAL					176.0	56.5	11.5	1	71.50	2		9	6			1,970	961	21
TOTALS CARRIED TO GENERAL SUMMARY							176.0	56.5	11.5	1	71.50	2		9	6			0.37 MI.	0.18 MI.	21 FT.

HAS-22-17.24

40
51

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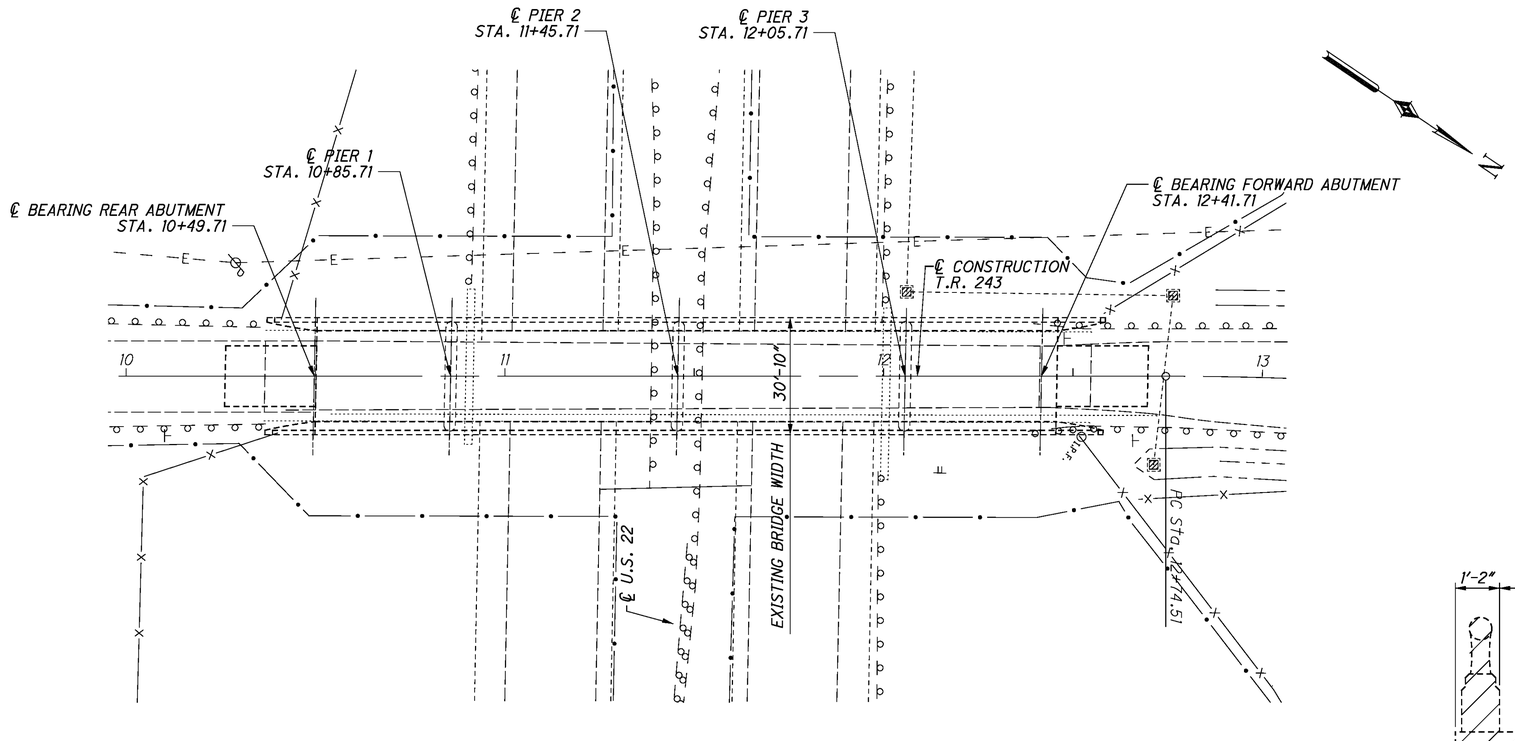

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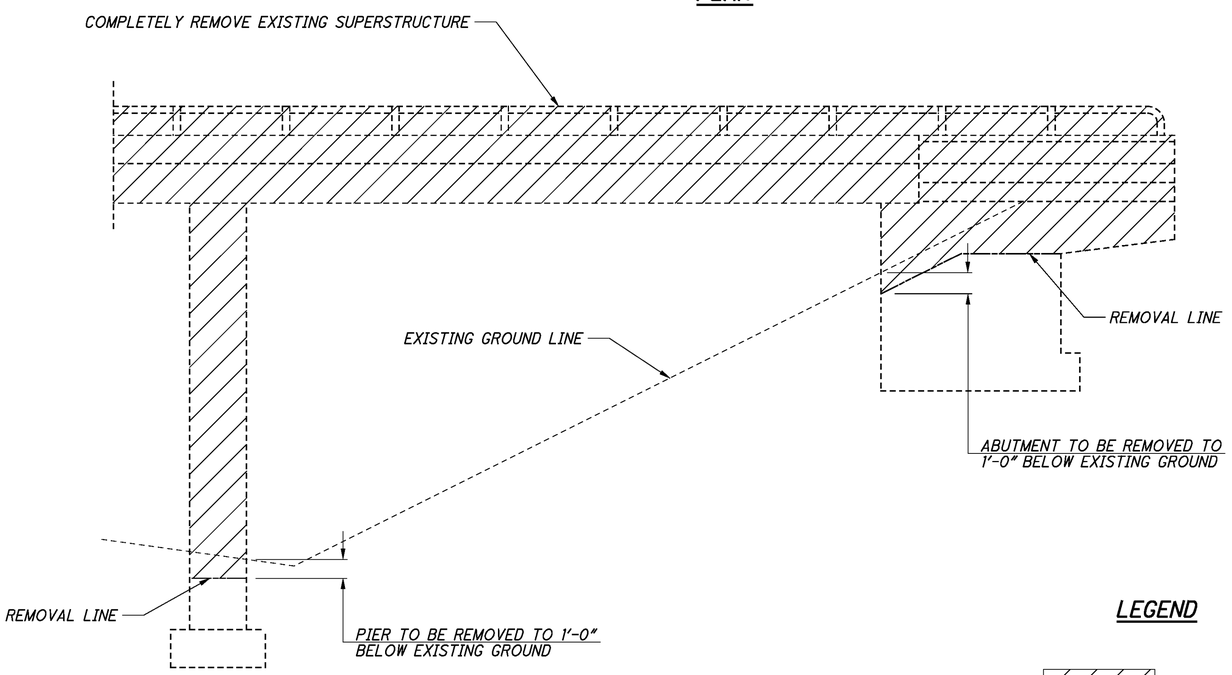


PARTIAL ELEVATION

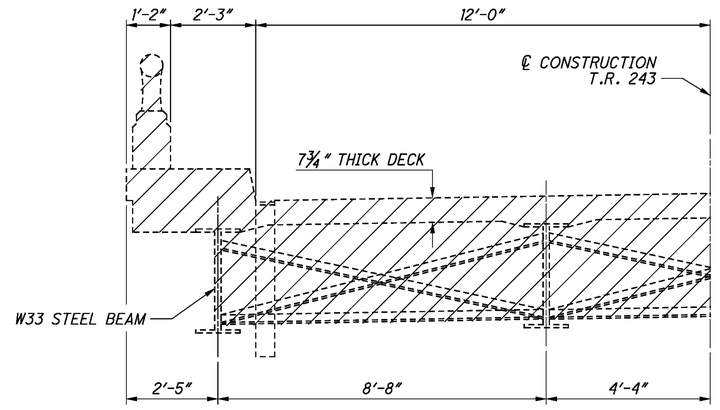
LEGEND

LIMITS OF DEMOLITION

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 36'-0" / 60'-0" / 60'-0" / 36'-0" C/C BEARINGS
ROADWAY: 24'-0" F/F SAFETY CURB
LOADING: C.F. = 130 (57)
SKEW: 1° 14' L.F.
APPROACH SLABS: AS-1-54 (25' LONG)
ALIGNMENT: TANGENT
CROWN: 0.016
STRUCTURAL FILE NUMBER: 3400964
DATE BUILT: 7/1/1962
DISPOSITION: COMPLETE SUPERSTRUCTURE REMOVAL, INCLUDING APPROACH SLABS, AND SUBSTRUCTURE REMOVAL TO 1'-0" BELOW FINISHED GROUND.



EXISTING TRANSVERSE SECTION

NOTES:

ITEM 202, STRUCTURE REMOVED, AS PER PLAN

STRUCTURE IS TO BE REMOVED AS REQUIRED IN ACCORDANCE WITH SECTION 202 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS EXCEPT AS NOTED BELOW.

1. SUPERSTRUCTURE IS TO BE COMPLETELY REMOVED.
2. SUBSTRUCTURE IS TO BE REMOVED TO 1'-0" BELOW THE TOP OF FINISHED GROUND.
3. APPROACH SLABS TO BE COMPLETELY REMOVED.
4. PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE RESTORATION OF THE APPROACH EMBANKMENT IN ACCORDANCE WITH THE CONSTRUCTION AND MATERIALS SPECIFICATIONS SECTION 203.
5. SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL WITHIN THE CONSTRUCTION LIMITS FOR AFFECTED AREAS IN ACCORDANCE WITH THE CONSTRUCTION AND MATERIALS SPECIFICATIONS SECTION 659.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 202, STRUCTURE REMOVED, AS PER PLAN.

SEE SHEET 7 FOR THE STRUCTURE DEMOLITION SEQUENCE UNDER THE SEQUENCE OF CONSTRUCTION NOTES.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
LAB	LAB	RAB	03 - 13
CHECKED	REVISED	STRUCTURE FILE NUMBER	
KRD			

DEMOLITION PLAN
TOWNSHIP ROAD 243
OVER U.S. ROUTE 22

HAS-22-17.24
PID No. 88923

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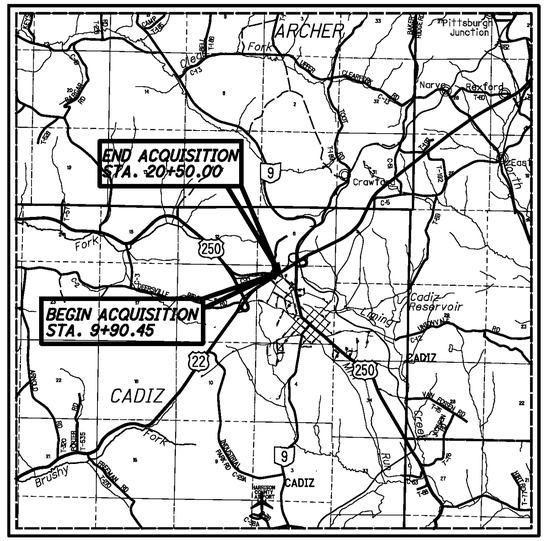
RIGHT OF WAY LEGEND SHEET HAS-22-17.24

HARRISON COUNTY
CADIZ TOWNSHIP
SECTION 5, 6 & 11 TOWNSHIP 10N., RANGE 5W.



LOCATION MAP

LATITUDE: 40°17'00" LONGITUDE: 81°00'15"

SCALE IN MILES
0 1 2 3 4

N

PORTION TO BE IMPROVED
STATE & FEDERAL ROUTES 9 22
COUNTY & TOWNSHIP ROADS
OTHER ROADS

UTILITY OWNERS	
TYPE	NAME & ADDRESS
ELECTRIC	AEP OHIO POWER COMPANY (TRANSMISSION) 700 MORRISON ROAD GAHANNA, OHIO 43230 CONTACT: MR. TONY PURSES PHONE: (330) 580-5028
ELECTRIC	AEP OHIO POWER COMPANY P.O. BOX 99 47687 NATIONAL ROAD ST. CLAIRSVILLE, OHIO 43950 CONTACT: MR. JEFF TURNER PHONE: (740) 699-7845
TELEPHONE	FRONTIER COMMUNICATIONS 1121 TUSCARAWAS AVENUE, NW NEW PHILADELPHIA, OH 44663 CONTACT: LARRY WENDELL PHONE: (330) 364-0510
CABLE	TIME WARNER CABLE 617 TUSCARAWAS AVENUE NEW PHILADELPHIA, OHIO 44663 CONTACT: MR. DAMIAN RIFFLE PHONE: (330) 494-9200
GAS	COLUMBIA GAS 300 LURAY DRIVE WINTERSVILLE, OH 43953 CONTACT: TIM SEECH PHONE: (740) 266-4282

NOTE: THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

INDEX OF SHEETS:

CONVENTIONAL SYMBOLS

County Line
Township Line
Section Line
Corporation Line or
Fence Line (Ex) x x (Pr)
Center Line
Right of Way (Ex) Ex R/W
Right of Way (Pr) R/W
Standard Highway Ease.(Ex) Ex SH
Temporary Right of Way TMP
Channel Ease. (Pr) CH
Utility Ease. (Ex) Ex U
Railroad or
Guardrail (Ex) (Pr)
Construction Limits
Edge of Pavement (Ex)
Edge of Pavement (Pr)
Edge of Shoulder (Ex)
Edge of Shoulder (Pr)

Ditch / Creek (Ex)
Ditch / Creek (Pr)
Tree Line (Ex)
Ownership Hook Symbol , Example
Property Line Symbol , Example
Break Line Symbol , Example
Tree (Pr) , Tree (Ex) , Shrub (Ex)
Tree (Remove) , Shrub (Remove)
Evergreen (Ex) , Stump
Evergreen (Remove) , Stump (Remove)
Wetland (Pr) , Grass (Pr) , Aerial Target
Post (Ex) , Mailbox (Ex) MB , Mailbox (Pr) MB
Light (Ex) , Telephone Marker (Ex) TEL
Fire Hydrant (Ex) , Water Meter (Ex) W
Water Valve (Ex) W , Utility Valve Unknown (Ex.)
Telephone Pole (Ex) , Power Pole (Ex)
Light Pole (Ex)

PROJECT DESCRIPTION

REMOVE EXISTING STRUCTURE CARRYING TOWNSHIP ROAD 243 OVER US 22. REALIGN THE TOWNSHIP ROAD TO THE NORTH OF US 22 TO ACCESS DENNISON AVENUE WEST OF THE EXISTING BRIDGE LOCATION.

PLANS PREPARED BY:

FIRM NAME : EUTHENICS, INC.
R/W DESIGNER: DANIEL T. BENDER, P.E.
R/W REVIEWER: RICHARD S. WASOSKY, P.E., P.S.
FIELD REVIEWER: DANIEL T. BENDER, P.E.
PRELIMINARY FIELD REVIEW DATE:
TRACINGS FIELD REVIEW DATE: 1/17/14
OWNERSHIP UPDATED BY: OR COLAN ASSOCIATES
DATE COMPLETED: 1/24/2014
PLAN COMPLETION DATE: 1/29/2014

STRUCTURE KEY

RESIDENTIAL
COMMERCIAL
OUT-BUILDING

TYPES OF TITLE LEGEND:
WDR: WARRANTY DEED WITH RESERVATION OF MINERAL RIGHTS
SH: STANDARD HIGHWAY EASEMENT
LA: LIMITED ACCESS
T: TEMPORARY EASEMENT
CH: CHANNEL EASEMENT
X: EXISTING CHANNEL EASEMENT

I, Terin J. Kaminski, P.S., have conducted a survey of the existing conditions for the Ohio Department of Transportation in 2012. The result of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinate system, north zone on NAD 83 (1986) datum. The iron pins and caps will be set in the "Adjustable Centerline Monument Assembly Box", installed by the construction contractor, after completion of construction, by the Right of Way Design Consultant, Euthenics, Inc. This work will be done in accordance with OAC 4733-37 as cited below. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "Minimum Standards for Boundary Survey in Ohio" unless so noted. The words I and my as used herein are to mean that either myself or someone working under my direct supervision.

BY Terin J. Kaminski
Terin J. Kaminski

SURVEYOR NO. 7207 DATE 11/05/13

SURVEYORS SEAL
STATE OF OHIO
TERIN J. KAMINSKI
7207
REGISTERED
PROFESSIONAL LAND SURVEYOR

I, Richard S. Wasosky, P.S., have calculated the proposed Property Lines, Gross Take, Net Take and Net Residue; as well as prepared legal descriptions necessary to acquire these parcels as shown herein. As a part of this project I have determined the location of the existing Property Lines for Property Takes contained herein. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "Minimum Standards for Boundary Survey in Ohio" unless so noted. The words I and my as used herein are to mean that either myself or someone working under my direct supervision.

BY
RICHARD S. WASOSKY

SURVEYOR NO. 8217 DATE 1/18/14

SURVEYORS SEAL
STATE OF OHIO
RICHARD S. WASOSKY
8217
REGISTERED
PROFESSIONAL SURVEYOR

FEDERAL PROJECT NO. E110(645)
PID NO. 88923
CALCULATED DTB CHECKED RSW
RIGHT OF WAY LEGEND SHEET
HAS-22-17.24
1 / 10
42 / 51

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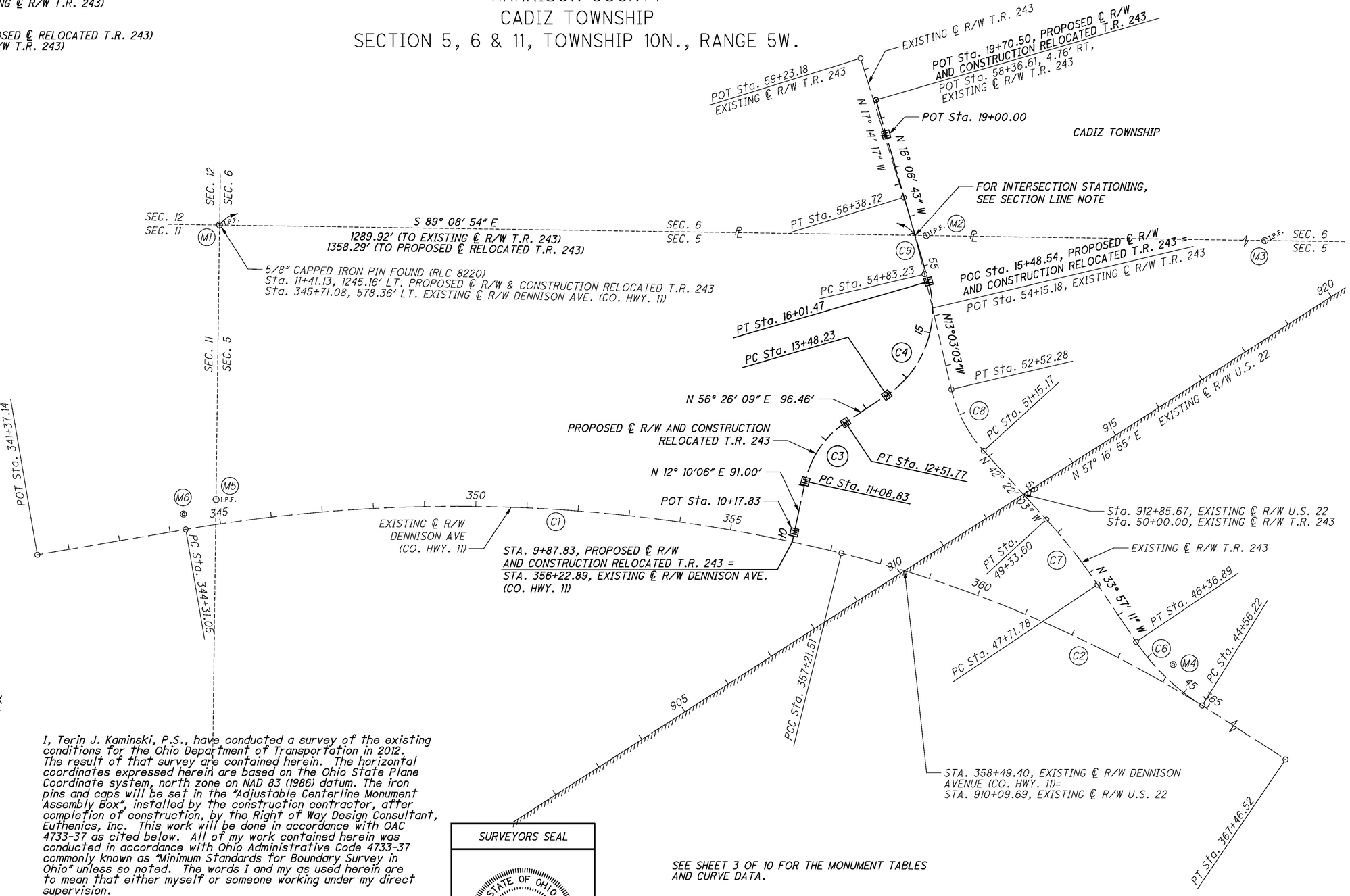
HAS-22-17.24

HARRISON COUNTY
CADIZ TOWNSHIP
SECTION 5, 6 & 11, TOWNSHIP 10N., RANGE 5W.

SECTION LINE NOTE:

PROPOSED ℄ R/W AND CONSTRUCTION RELOCATED T.R. 243
Sta. 16+94.99, ℄ (PROPOSED ℄ RELOCATED T.R. 243)
Sta. 55+61.16, 0.74' RT. (EXISTING ℄ R/W T.R. 243)

EXISTING ℄ R/W T.R. 243
Sta. 16+95.22, 0.74' LT. (PROPOSED ℄ RELOCATED T.R. 243)
Sta. 55+61.38, ℄ (EXISTING ℄ R/W T.R. 243)



MONUMENT LEGEND

- ▣ PROPOSED R/W MONUMENT BOX
- ◎ EXISTING CONCRETE MONUMENT W/BRASS ODOT R/W DISK
- ☄ RAILROAD SPIKE FOUND
- ○I.P.F. IRON PIN FOUND
- ⊙I.P.F. IRON PIN FOUND W/ ID CAP
- ●I.P.S. IRON PIN SET W/ ID CAP
- ◎P.F. IRON PIPE FOUND
- ◉P.S. IRON PIPE SET
- ⊕P.K.F. P.K. NAIL FOUND
- •P.K.S. P.K. NAIL SET

I, Terin J. Kaminski, P.S., have conducted a survey of the existing conditions for the Ohio Department of Transportation in 2012. The result of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinate system, north zone on NAD 83 (1986) datum. The iron pins and caps will be set in the "Adjustable Centerline Monument Assembly Box", installed by the construction contractor, after completion of construction, by the Right of Way Design Consultant, Euthenics, Inc. This work will be done in accordance with OAC 4733-37 as cited below. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "Minimum Standards for Boundary Survey in Ohio" unless so noted. The words I and my as used herein are to mean that either myself or someone working under my direct supervision.

BY Terin J. Kaminski
Terin J. Kaminski

SURVEYOR NO. 7207 *DATE* 11/05/13

SURVEYORS SEAL

STATE OF OHIO
TERIN J. KAMINSKI
7207
REGISTERED
PROFESSIONAL LAND SURVEYOR

SEE SHEET 3 OF 10 FOR THE MONUMENT TABLES AND CURVE DATA.

BEARINGS SHOWN HEARON ARE RELATIVE TO GRID NORTH OF THE OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE. HORIZONTAL DATUM NAD 83 (1986)

BASIS OF EXISTING ℄ OF R/W AND R/W WIDTH: THE EXISTING R/W WIDTH AND LOCATION WERE DETERMINED FROM ODOT R/W PLANS HAS-22-15.09 ON FILE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 11 OFFICE NEW PHILADELPHIA, OHIO.

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

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HORIZONTAL SCALE IN FEET
0 50 100 200

PID NO. 88923

R/W DESIGNER DTB
R/W REVIEWER TJK

CENTERLINE PLAT

HAS-22-17.24

2 / 10

43 / 51

HAS-22-17.24

HARRISON COUNTY
CADIZ TOWNSHIP
SECTION 5, 6 & 11, TOWNSHIP 10N., RANGE 5W.

*ITEM 623 - MONUMENT ASSEMBLY, AS PER PLAN

THE PLACING OF MONUMENTS SHALL BE UNDER THE DIRECTION OF A SURVEYOR REGISTERED IN THE STATE OF OHIO. THE CENTERLINE MONUMENT ASSEMBLY BOXES WILL BE INSTALLED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION. THE IRON PIN WITH CAP MARKING THE ACTUAL CENTERLINE STATION POINT SHALL BE SET BY THE RIGHT OF WAY DESIGN CONSULTANT, EUTHENICS, INC.

PAYMENT FOR THE CONTRACTOR TO INSTALL THE MONUMENT ASSEMBLY BOXES AND THE RIGHT OF WAY DESIGN CONSULTANT, EUTHENICS, INC. TO SET THE IRON PIN WITH CAP MARKING THE ACTUAL CENTERLINE STATION SHALL BE INCLUDED WITH THIS ITEM AND PAYMENT SHALL BE MADE AT THE UNIT PRICE BID PER EACH FOR ITEM 623, MONUMENT ASSEMBLY, AS PER PLAN.

CHANGES OR ALTERATIONS TO THE LOCATION OF ANY MONUMENTS SHOWN ON THIS PLAT REQUIRES PRIOR APPROVAL FROM THE DISTRICT REAL ESTATES ADMINISTRATION OR THE OHIO DEPARTMENT OF TRANSPORTATION. A REVISED CENTERLINE PLAT WITH NEW LOCATIONS SHALL BE RECORDED IN THE APPLICABLE COUNTY RECORDS AND THE DEPARTMENT OF TRANSPORTATION. SPECIFICATIONS FOR CENTERLINE MONUMENTS, AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1 OF THE OHIO DEPARTMENT OF TRANSPORTATION.

MONUMENT TABLE

PROP. ℄ OF R/W AND CONSTRUCTION RELOCATED T.R. 243		PROJECT COORDINATES		MONUMENTS TO BE SET DURING CONSTRUCTION		R/W MON. EXPECTED TO BE DISTURBED	
STATION	OFFSET	NORTHING	EASTING	MON. ASSY.	REF. MON.	R/W MON.	DESCRIPTION
POT 10+17.83	℄	228012.527	2385292.112	1*			PROPOSED MONUMENT - CONCRETE MONUMENT SET
PC 11+08.83	℄	228101.490	2385311.295	1*			PROPOSED MONUMENT - CONCRETE MONUMENT SET
PT 12+51.77	℄	228216.649	2385389.857	1*			PROPOSED MONUMENT - CONCRETE MONUMENT SET
PC 13+48.23	℄	228269.980	2385470.236	1*			PROPOSED MONUMENT - CONCRETE MONUMENT SET
PT 16+01.47	℄	228492.137	2385551.806	1*			PROPOSED MONUMENT - CONCRETE MONUMENT SET
POT 19+00.00	℄	228778.942	2385468.958	1*			PROPOSED MONUMENT - CONCRETE MONUMENT SET
9+90.45	89.23' LT.	228004.577	2385199.113				MAG NAIL SET IN PAVEMENT
10+16.46	90.00' LT.	228030.159	2385203.845				I.P. SET
12+00.00	85.00' LT.	228237.499	2385286.533				I.P. SET
13+00.00	115.00' LT.	228339.141	2385366.468				I.P. SET
14+67.85	212.48' RT.	228280.999	2385741.649				I.P. SET
14+92.80	130.48' RT.	228350.993	2385678.854			1	I.P. SET WITHIN CONST. LIMITS
15+33.00	87.84' RT.	228419.048	2385646.963			1	I.P. SET WITHIN CONST. LIMITS
15+50.00	80.00' LT.	228439.497	2385479.627				I.P. SET
16+51.03	78.15' RT.	228561.443	2385613.134			1	I.P. SET WITHIN CONST. LIMITS
16+72.00	75.37' RT.	228580.815	2385604.641				I.P. SET
16+88.52	21.18' RT.	228581.649	2385547.998			1	I.P.F. WITHIN CONSTRUCTION LIMITS
17+14.91	65.30' LT.	228583.001	2385457.589				I.P. SET
17+54.55	64.41' RT.	228657.085	2385571.203			1	I.P. SET WITHIN CONST. LIMITS
18+79.40	27.03' RT.	228766.658	2385500.645			1	I.P. SET WITHIN CONST. LIMITS
18+79.60	37.03' RT.	228769.622	2385510.196			1	I.P. SET WITHIN CONST. LIMITS
19+53.21	34.43' LT.	228820.509	2385421.115				I.P. SET
TOTAL CARRIED TO GENERAL SUMMARY				6*		7	

DENNISON AVENUE EXISTING CONTROL (FOUND & USED)

(M4)
N. 227744.140
E. 2386029.543
STA. 364+00.02, 40.00' LT.
CONCRETE MONUMENT WITH
BRASS ODOT R/W DISK

(M6)
N. 228061.962
E. 2384092.113
STA. 344+31.05, 55.00' LT.
CONCRETE MONUMENT WITH
BRASS ODOT R/W DISK

* STATIONING ESTABLISHED FROM ℄ R/W DENNISON AVENUE

SECTIONS 5 AND 6 - SECTION LINE EXISTING CONTROL (FOUND & USED)

(M1)
N. 228602.176
E. 2384167.713
CAPPED IRON PIN
(RLC 8220)

(M2)
N. 228581.649
E. 2385547.998
CAPPED IRON PIN
(KYER P.S. 6948)

(M3)
N. 228571.841
E. 2386208.753
CAPPED IRON PIN
(KYER P.S. 6948)

SECTIONS 5 AND 11 - SECTION LINE EXISTING CONTROL (FOUND & USED)

(M1)
N. 228602.176
E. 2384167.713
CAPPED IRON PIN
(RLC 8220)

(M5)
N. 228064.121
E. 2384160.679
IRON PIN

CURVE DATA
PROPOSED ℄ R/W AND CONSTRUCTION
RELOCATED T.R. 243

(C3)
P.I. Sta. 11+84.08
Δ = 44° 16' 02" (RT)
Dc = 30° 58' 17"
R = 185.00'
T = 75.25'
L = 142.93'
E = 14.72'
CH. = 139.40'
CH. BR. = N 34° 18' 07" E

(C4)
P.I. Sta. 14+59.00
Δ = 72° 32' 52" (LT)
Dc = 28° 38' 52"
R = 200.00'
T = 146.77'
L = 253.24'
E = 48.08'
CH. = 236.66'
CH. BR. = N 20° 09' 42" E

CURVE DATA
EXISTING ℄ R/W DENNISON AVE. (CO. HWY. 11)

(C1)
P.C. Sta. 344+31.05
P.I. Sta. 350+85.61
Δ = 23° 39' 30" (RT)
Dc = 1° 50' 00"
R = 3,125.23'
T = 654.56'
L = 1,290.46'
E = 67.81'
CH. = 1,281.31'
CH. BR. = S 87° 54' 30" E

(C2)
P.C.C. Sta. 357+21.51
P.I. Sta. 362+41.59
Δ = 23° 55' 01" (RT)
Dc = 2° 20' 00"
R = 2,455.53'
T = 520.08'
L = 1,025.01'
E = 54.47'
CH. = 1,017.58'
CH. BR. = S 64° 07' 15" E

CURVE DATA
EXISTING ℄ R/W T.R. 243

(C6)
P.I. Sta. 45+47.92
Δ = 24° 12' 33" (RT)
Dc = 13° 23' 59"
R = 427.58'
T = 91.70'
L = 180.67'
E = 9.72'
CH. = 179.32'
CH. BR. = N 46° 03' 28" W

(C7)
P.I. Sta. 48+52.83
Δ = 8° 24' 52" (LT)
Dc = 5° 12' 00"
R = 1,101.84'
T = 81.05'
L = 161.82'
E = 2.98'
CH. = 161.67'
CH. BR. = N 38° 09' 37" W

(C8)
P.I. Sta. 51+85.25
Δ = 29° 15' 00" (RT)
Dc = 21° 20' 00"
R = 268.57'
T = 70.08'
L = 137.11'
E = 8.99'
CH. = 135.62'
CH. BR. = N 27° 44' 33" W

(C9)
P.I. Sta. 55+61.01
Δ = 4° 07' 14" (LT)
Dc = 2° 39' 00"
R = 2,162.10'
T = 77.78'
L = 155.49'
E = 1.40'
CH. = 155.46'
CH. BR. = N 15° 10' 40" W

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		1/29/14

PID NO. 88923
R/W DESIGNER DTB
R/W REVIEWER RSW

CENTERLINE PLAT

HAS-22-17.24

3 / 10

44
51

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HAS-22-17.24
HARRISON COUNTY
CADIZ TOWNSHIP
SECTION 5, 6 & 11, TOWNSHIP 10N., RANGE 5W.

NOTE:

1) GAP FOUND BETWEEN PARCEL NO. 2 AND EXISTING R/W LINE. THE JUNIOR AND SENIOR DEEDS ILLUSTRATE THE INTENT FOR THEIR COMMON NORTH-SOUTH BOUNDARY LINE TO EXTEND TO THE NORTH RIGHT OF WAY LINE OF DENNISON AVENUE (CH 11)

2) THERE ARE NO EXISTING LANDSCAPED AREAS WITHIN THE WORK LIMITS.

3) REFER TO THE SURVEYING PARAMETERS NOTE IN THE GENERAL NOTES FOR PROJECT CONTROL INFORMATION.

(XX) - EASEMENTS PREVIOUSLY ACQUIRED WITH THE PLAN HAS-22-15.09 DATED 1960 ON FILE AT ODOT DISTRICT 11.

④ R & F COAL COMPANY, AN OHIO LIMITED LIABILITY COMPANY, NOW KNOWN AS CAPSTONE HOLDING COMPANY, AN OHIO CORPORATION
P.N. 05-0000283.000
VOL. 227 PG. 481

③ LANDFILL RESOURCES, INC. A DELAWARE CORPORATION
P.N. 04-0000032.002
VOL. 228 PG. 634

② NIRA C. EBERHART
P.N. 04-0000533.000
VOL. 194 PG. 480

① DONALD E. EBERHART
P.N. 04-0000366.000
VOL. 29, PG. 763

⑤ LEONARD B. AKA LEONARD FERRARO
P.N. 05-0000496.000
VOL 182 PG 1727
VOL 170 PG 141

LEONARD B. FERRARO
P.N. 05-0000412.000
VOL 181 PG 1894

DAVID W. FERRI AND GINA L. DICKERSON
P.N. 05-0001418.000
VOL 224 PG 708

P.N. 05-0001781.000
VOL 190 PG 427

P.N. 05-0000906.000
BK. 179 PG. 1640

GARY EBERHART
P.N. 04-0000310.000
VOL 181 PG 499

DONALD E. EBERHART
P.N. 04-0000533.001
VOL. 231 PG. 623

GARY EBERHART
P.N. 04-0000309.000
VOL. 179 PG. 957

UNKNOWN HEIRS OF TABACCHI

CADIZ TOWNSHIP

VILLAGE OF CADIZ

END R/W ACQUISITION
STA. 20+50.00

BEGIN R/W ACQUISITION
STA. 9+90.45

EXISTING ℄ R/W T.R. 243

PROP. ℄ R/W AND CONSTRUCTION RELOCATED T.R. 243

STA. 9+87.83 PROP. ℄ RELOCATED T.R. 243=
STA. 356+22.89 EX. ℄ DENNISON AVE. (CH. 11)

Sta. 6+88.11 ℄ EXIST. T.R. 243
Sta. 364+02.10 ℄ DENNISON AVE.

EXISTING ℄ R/W DENNISON AVE. (CO. HWY. 11)

EXISTING BILLBOARD ADC#32886 (TO BE REMOVED)

EXISTING BRIDGE (TO BE REMOVED)

PROP. TURN AROUND

EX. 30" STORM

CHANNEL EASEMENT

TEMPORARY EASEMENT

MATCH LINE

WESTBOUND LANES EXISTING R/W VARIES 72' - 220'

EASTBOUND LANES

CHESTNUT LANE

BROKAW AVE.

POINT A

POINT B

S 00° 44' 56" W 2748.48'

S 89° 08' 54" E

1387.32'

921.36'

SEE NOTE 1

Ex R/W

Ex LA

PROPERTY MAP

HAS-22-17.24

PID NO. 88923

R/W DESIGNER DTB
R/W REVIEWER RSW

HORIZONTAL SCALE IN FEET
0 50 100 200

REV. BY	DATE	DESCRIPTION
DATE COMPLETED	1/29/14	

4 / 10

45 / 51

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TOTAL NUMBER OF :

5 OWNERSHIPS
8 PARCELS
0 TOTAL TAKES
0 OWNERSHIPS W/ STRUCTURES INVOLVED

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

ALL AREAS IN ACRES

GRANTEE:

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION
UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED BOOK	AS ACQUIRED PAGE
1-CH	DONALD E. EBERHART	10	INSTRUMENT NO. 9600001622	040000366.000	2.3490	0.2728	0.0076	0.0000	0.0076	NO	-	2.3490	STATE	PERPETUAL EASEMENT TO CONSTRUCT AND MAINTAIN A CHANNEL		
			(V. 29, P. 763)											EX. CHESAPEAKE EXPLORATION, LLC OIL AND GAS LEASE V.192 P.1140		
														EX. OHIO POWER COMPANY, AN OHIO CORPORATION UTILITY EASEMENT V. 93, P. 167		
														EX. STATE OF OHIO HIGHWAY EASEMENT V. 96, P. 214		
														EX. M.H. LIMING AND MARY E. LIMING RIGHT OF WAY EASEMENT V. 133, P. 10		
														EX. VERNON M. AND DOROTHY L. SIMONSON RIGHT OF WAY EASEMENT V. 186, P. 432		
														EX. COLUMBIA GAS OF OHIO, INC. UTILITY EASEMENT V. 199, P.686		
1-T		10					0.0226	0.0000	0.0226					OBTAIN INGRESS AND EGRESS TO A CHANNEL EASEMENT AND PERFORM GRADING		
2-WDR	NIRA C. EBERHART	6, 7, 8	V. 194; P. 480	040000533.000	8.2170	0.6980 (c)	2.7357	0.5620	2.1737	S	**3.4544	-		DENNISON AVENUE P.R.O. AREA = 0.1788 AC.		
														T.R. 243 P.R.O. AREA = 0.5192 AC.		
														**LIMITED ACCESS AREA = 1.8909 AC.		
														ADC #32886 SIGN (TAKE)		
														EX. KESSLER SIGN COMPANY, AN OHIO CORPORATION LEASE V. 76, P 697		
														EX. CHESAPEAKE EXPLORATION, LLC OIL & GAS LEASE V. 196, P. 1817		
														EX. OHIO POWER COMPANY EASEMENT V. 209, P. 630		
3-WDR	LAND RESOURCES, INC. A DELAWARE CORPORATION	8	V. 228; P. 634	040000032.002	45.1500	1.3270 (c)	0.4147	0.3125	0.1022	NO	43.7208	-		T.R. 243 P.R.O. AREA IS APPROXIMATELY 1.3270 AC.		
														EX. THE YOUGHIOGHENY AND OHIO COAL COMPANY, AN OHIO CORP. COAL, OIL, AND GAS LEASE V. 63, P. 373		
														EX. REPUBLIC STEEL CORP., A NEW JERSEY CORP. OIL AND GAS LEASE V. 64, P. 100		
														EX. VALLEY MINING, INC., AN OHIO CORP. COAL LEASE V. 75, P. 42		
														EX. JACK MARTIN AND ETHEL MARTIN, DBA MARTIN SOLID WASTE REMOVAL ACCESS EASEMENT V. 221, P. 495		
														EX. CONSOLIDATED COAL COMPANY, A DELAWARE CORP. PIPELINE EASEMENT V. 225, P. 201		
														EX. JEFFCO RESOURCES, INC. PIPELINE EASEMENT AND MINING RESTRICTION V. 228, P. 634		
														*APPROXIMATELY 74' OF FENCE		
4-WDR	R & F COAL COMPANY, AN OHIO LIMITED	8	V. 227; P. 481	050000238.000	22.6800	1.3280 (c)	0.1597	0.0268	0.1329	NO	-	21.2191		T.R. 243 P.R.O. AREA IS APPROXIMATELY 1.3280 AC.		
	LIABILITY COMPANY, NOW KNOWN AS CAPSTONE HOLDING COMPANY, AN OHIO CORPORATION													EX. CONSOLIDATED COAL COMPANY, A DELAWARE CORPORATION COAL LEASE V. 47, P. 423		
														EX. ANTHONY MINING COMPANY, INC. AN OHIO CORPORATION COAL LEASE V. 168, P. 2648		
														EX. MARQUETTE EXPLORATION, LLC A DELAWARE LIMITED LIABILITY COMPANY OIL AND GAS LEASE V. 190, P. 2689		
														*APPROXIMATELY 276' OF FENCE		
4-T		8					0.2059	0.0000	0.2059					TO CONSTRUCT AND MAINTAIN A TEMPORARY ROAD AND PERFORM GRADING		
5-WDR	LEONARD B. AKA LEONARD FERRARO	7, 8			3.2222 +	0.6975(c) +	0.7659 +	0.6975 +	0.0684 +	NO	-	2.4563		EX. OHIO POWER COMPANY EASEMENT V. 139, P. 18		
			V. 182; P. 1727	050000496.000	2.5350	0.3997	0.4681	0.3997	0.0684					EX. STATE OF OHIO HIGHWAY EASEMENT V. 149, P. 378		
			V. 170; P. 141											*APPROXIMATELY 413' OF FENCE		
			V. 181; P. 1894	050000412.000	0.6872	0.2978	0.2978	0.2978	0.0000					EX. CHESAPEAKE EXPLORATION, LLC OIL AND GAS LEASE V.189 P. 1090		
5-T		7, 8					0.1241 +	0.0000 +	0.1241 +				STATE	TO CONSTRUCT AND MAINTAIN A TEMPORARY ROAD AND PERFORM GRADING		
				050000496.000			0.1084	0.0000	0.1084							
				050000412.000			0.0157	0.0000	0.0157							

TYPES OF TITLE LEGEND:
WDR: WARRANTY DEED WITH RESERVATION OF MINERAL RIGHTS
CH: CHANNEL EASEMENT
T: TEMPORARY EASEMENT

NOTE: ALL TEMPORARY PARCELS TO BE OF 12 MONTH DURATION.

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

(c) CALCULATED AREA
* DENOTES RIGHT OF WAY ENCROACHMENT
** EXCLUDES AREA WITHIN THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION LIMITED ACCESS
+ TOTAL FROM PARCEL 050000496.000 AND PARCEL 0500000412.000

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		1/29/14

FEDERAL PROJECT NO. E110(645)
PID NO. 88923
STATE JOB NO. 516540
R/W DESIGNER DTB
R/W REVIEWER RSW

SUMMARY OF ADDITIONAL RIGHT OF WAY

HAS-22-17.24

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HAS-22-17.24
HARRISON COUNTY
CADIZ TOWNSHIP
SECTION 5, TOWNSHIP 10N., RANGE 5W.

TO U.S. 250 (SEE SHEET 10/10)

DONALD E. EBERHART
P.N. 04-0000532.000
VOL. 194 PG. 483
COMMERCIAL

CADIZ TOWNSHIP

2 STORY RES.
800 S.F.

(2)
NIRA C. EBERHART
P.N. 04-0000533.000
VOL. 194 PG. 480
43140 DENNISON AVE.
RESIDENTIAL

SEE NOTE 1

EXISTING ℄ R/W DENNISON AVENUE (CO. HWY. 11)

CONSTRUCTION LIMITS

RESERVED AREA FOR MANUFACTURED WATER QUALITY STRUCTURE, TYPE 1

EXISTING GRAVEL DRIVE

EX. 24" STORM

EX. CATCH BASIN

EX. 24" STORM

EX. CATCH BASIN

POLE BARN

GARY EBERHART
P.N. 04-0000309.000
VOL. 172 PG. 951
RESIDENTIAL

GARY EBERHART
P.N. 04-0000310.000
VOL. 181 PG. 499
RESIDENTIAL

1 STORY RES.
1600 S.F.

16X

MAG NAIL SET
STA. 9+90.45
89.23' LT.

EX. 24" STORM

EXISTING OVERHEAD ELECTRIC LINES (TO BE RELOCATED BY AEP)

14LA

16LA

17LA

EXISTING 30" CULVERT

I.P. IN MON BOX
STA. 10+17.83

STA. 9+87.83, PROPOSED ℄ R/W AND CONSTRUCTION RELOCATED T.R. 243 = STA. 356+22.89, EXISTING ℄ R/W DENNISON AVENUE (CO. HWY. 11)

BEGIN R/W ACQUISITION STA. 9+90.45

N 10° 28' 43" E
26.02'

STA. 10+16.46
90.00' LT.

2-WDR
119,166 S.F.

PROP. CATCH BASIN NO. 8

PROPOSED ASPHALT PAVEMENT

AGGREGATE DRAINS (TYP.)

PROPOSED V-DITCH W/TURF REINFORCING MAT, TYPE 3

PROPOSED ℄ R/W & CONSTRUCTION RELOCATED T.R. 243

PC STA. 11+08.83

CONSTRUCTION LIMITS

EXISTING OVERHEAD ELECTRIC LINES (TO BE RELOCATED BY AEP)

PROP. CATCH BASIN NO. 8

Ex LA S 61° 42' 02" W 260.37' Ex LA

STA. 10+17.51, 47.92' RT.
STA. 909+10.40, 153.06' LT.

19LA

N 38° 10' 57" E 129.31'

N 21° 44' 32" E 223.22'

STA. 12+00.00
85.00' LT.

N 12° 10' 06" E 91.00'

MATCH LINE STA. 12+50 SEE SHEET 7

TO CADIZ

P.C.C. 357+21.51

CURVE DATA
PROPOSED ℄ R/W AND CONSTRUCTION RELOCATED T.R. 243

(C3)

P.I. Sta. 11+84.08
Δ = 44° 16' 02" (RT)
Dc = 30° 58' 17"
R = 185.00'
T = 75.25'
L = 142.93'
E = 14.72'
CH. = 139.40'
CH. BR. = N 34° 18' 07" E

CURVE DATA
EXISTING ℄ R/W DENNISON AVENUE (CO. HWY. 11)

(C1)

P.C. Sta. 344+31.05
P.I. Sta. 350+85.61
Δ = 23° 39' 30" (RT)
Dc = 1° 50' 00"
R = 3125.23'
T = 654.56'
L = 1290.46'
E = 67.81'
CH. = 1281.31'
CH. BR. = S 87° 54' 30" E

(C2)

P.C.C. Sta. 357+21.51
P.I. Sta. 362+41.59
Δ = 23° 55' 01" (RT)
Dc = 2° 20' 00"
R = 2455.53'
T = 520.08'
L = 1025.01'
E = 54.47'
CH. = 1017.58'
CH. BR. = S 64° 07' 15" E

STATIONING NOTE

STATIONING ESTABLISHED FROM U.S. ROUTE 22 ℄ R/W UTILIZING HAS-22-15.09 RIGHT OF WAY PLANS

ALL OTHER STATIONING SHOWN WAS ESTABLISHED FROM PROPOSED ℄ R/W AND CONSTRUCTION RELOCATED T.R. 243

NOTE 1:
GAP FOUND BETWEEN PARCEL NO. 2 AND EXISTING R/W LINE. THE JUNIOR AND SENIOR DEEDS ILLUSTRATE THE INTENT FOR THEIR COMMON NORTH-SOUTH BOUNDARY LINE TO EXTEND TO THE NORTH RIGHT OF WAY LINE OF DENNISON AVENUE (CO. HWY. 11).

CURVE DATA
EXISTING R/W DENNISON AVENUE (CO. HWY. 11)

(C10)

Δ = 02° 30' 17" (RT)
R = 3155.23'
L = 137.93'
CH. = 137.92'
CH. BR. = N 78° 16' 08" W

LEGEND

I.P.S. 2" ALUMINUM CAP STAMPED WITH "ODOT R/W" AND "T. KAMINSKI S7207"

(XX) - EASEMENTS PREVIOUSLY ACQUIRED WITH PLAN HAS-22-15.09 DATED 1960 ON FILE AT ODOT DISTRICT 11.

REV. BY	DATE	DESCRIPTION
DATE COMPLETED	1/29/14	

HORIZONTAL SCALE IN FEET
0 10 20 40

PID NO. 88923

R/W DESIGNER DTB
R/W REVIEWER RSW

RIGHT OF WAY TOPO SHEET
STA. 10+00.00 TO STA. 12+50.00

HAS-22-17.24

6 / 10

47 / 51

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HAS-22-17.24
HARRISON COUNTY
CADIZ TOWNSHIP
SECTION 5, TOWNSHIP 10 N., RANGE 5 W.

LEGEND

- ● I.P.S. — 2" ALUMINUM CAP STAMPED WITH "ODOT R/W" AND "T. KAMINSKI ST207"
- * — DENOTES ENCROACHMENTS
- (XX) — EASEMENTS PREVIOUSLY ACQUIRED WITH PLAN HAS-22-15.09 DATED 1960 ON FILE AT ODOT DISTRICT 11.
- EXISTING GRAVEL ROAD TO BE REMOVED

(1) P.O.C. STA. 15+48.54, PROP. ℄ R/W AND CONSTRUCTION RELOCATED T.R. 243 = P.O.T. STA. 54+15.18, EXISTING ℄ R/W T.R.243

STATIONING NOTES

STATIONING ESTABLISHED FROM EXISTING ℄ R/W T.R. 243

STATIONING ESTABLISHED FROM U.S. ROUTE 22 ℄ R/W UTILIZING HAS-22-15.09 RIGHT OF WAY PLANS

ALL OTHER STATIONING SHOWN WAS ESTABLISHED FROM PROPOSED ℄ R/W & CONSTRUCTION RELOCATED T.R. 243.

13+00.00, 115.00' LT.
N 38° 10' 57" E, 129.31'
R/W
I.P.S.
N 48° 25' 54" E, 151.25'
15+50.00, 80.00' LT.
54+32.89, 78.02' LT.
CONSTRUCTION LIMITS
2-WDR
119,166 S.F.
2
NIRA C. EBERHART
P.N. 04-0000533.000
VOL. 194 PG. 480
43140 DENNISON AVE.
RESIDENTIAL
AGGREGATE DRAINS (TYP.)
7.5' (TYP.)
PC Sta. 13+48.23
PROPOSED V-DITCH W/TURF REINFORCING MAT, TYPE 3
PROPOSED 2' FLAT BOTTOM DITCH W/ TURF REINFORCING MAT, TYPE 3
PROP. ℄ R/W AND CONSTRUCTION RELOCATED T.R. 243
MATCH LINE STA. 12+50, SEE SHEET 6
PT Sta. 12+51.77
N 56° 26' 09" E 96.46'
14 PROPOSED ASPHALT PAVEMENT
N 13° 07' 03" W, 230.95'
EXISTING BILLBOARD SIGN (TO BE REMOVED) ADC #32886
Δ = 14° 45' 52"
R = 268.57'
L = 69.21'
CH. BR. = S 20° 29' 59" E
CH. = 69.02'
14+58.38, 48.09' RT.
53+04.60, ℄
EXISTING OVERHEAD ELECTRICAL LINES (RELOCATED BY AEP)
℄ 52.32'
EXISTING ℄ R/W T.R. 243
PROJECT CONTROL POINT NO. 200
CONSTRUCTION LIMITS
S 61° 42' 02" W, 260.37'
N 10° 42' 28" W, 465.19'
EXISTING LA FENCE
Ex LA
S 30° 00' 56" W, 105.22'
13+49.15, 174.48' RT.
51+41.43, 93.47' LT.
911+70.00, 133.00' LT.
14+05.21, 141.42' RT.
51+83.07, ℄
912+63.52, 181.20' LT.
14+18.84, 161.76' RT.
51+73.12, 30.00' RT.
912+92.83, 169.85' LT.
N 42° 22' 03" W, 181.57'
MATCH LINE STA. 16+50, SEE SHEET 9
EXISTING ℄ R/W T.R. 243
EXISTING GUARDRAIL (TO BE REMOVED)
PROPOSED LA FENCE
S 51° 12' 05" W, 107.17'
14+74.03, 188.00' RT.
52+34.77, 127.69' LT.
14+67.85, 212.48' RT.
51+83.77, 136.93' RT.
914+00.00, 170.00' LT.
* EXISTING FENCE (TO BE REMOVED)
PC Sta. 12+74.51
PROJECT CONTROL POINT NO. 101
LEONARD B. FERRARO
P.N. 05-0000412.000
VOL. 181 PG. 1894
VACANT LAND
EXISTING ℄ R/W T.R. 243
MATCH LINE STA. 16+50, SEE SHEET 8
PC Sta. 54+83.22
16+17.12 ℄
N 08° 46' 12" W, 145.81'
PC Sta. 15+48.54
3.41' LT.
N 16° 06' 43" W, 369.03'
5-WDR
33,363 S.F.
PT Sta. 15+56.18
N 25° 06' 31" W, 254.36'
S 13° 24' 17" E, 145.32'
S 21° 31' 11" E, 241.90'
15+33.00, 87.84' RT.
53+75.00, 80.31' RT.
EX. ℄ CONSTRUCTION T.R. 243
5-T
5,405 S.F.
CONSTRUCTION LIMITS
S 78° 44' 32" W, 95.97'
14+92.80, 130.48' RT.
53+01.48, 95.92' RT.
913+85.00, 262.83' LT.
14+98.79, 152.00' RT.
53+00.71, 119.73' RT.
16+50.00, 78.00' RT.
55+19.00, 79.89' RT.
Δ = 02° 04' 15"
R = 2,162.10'
L = 78.14'
CH. BR. = S 14° 09' 11" E
CH. = 78.14'
S 41° 53' 49" E, 94.03'
S 21° 16' 35" E 58.20'
66.61'
27.42'
5
LEONARD B. AKA LEONARD FERRARO
P.N. 05-0000496.000
VOL. 182 PG. 1727
VOL. 170, PG. 141
VACANT LAND

CURVE DATA
PROPOSED ℄ R/W AND CONSTRUCTION RELOCATED T.R. 243

C3	C4
P.I. Sta. 11+84.08	P.I. Sta. 14+95.00
Δ = 44° 16' 02" (RT)	Δ = 72° 32' 52" (LT)
Dc = 30° 58' 17"	Dc = 28° 38' 52"
R = 185.00'	R = 200.00'
T = 75.25'	T = 146.77'
L = 142.93'	L = 253.24'
E = 14.72'	E = 48.08'
CH. = 139.40'	CH. = 236.66'
CH. BR. = N 34° 18' 07" E	CH. BR. = N 20° 09' 42" E

CURVE DATA
EXISTING ℄ R/W T.R. 243

C8	C9
P.I. Sta. 51+85.25	P.I. Sta. 55+61.01
Δ = 29° 15' 00" (RT)	Δ = 4° 07' 14" (LT)
Dc = 21° 20' 00"	Dc = 2° 39' 00"
R = 268.57'	R = 2,162.10'
T = 70.08'	T = 77.78'
L = 137.11'	L = 155.49'
E = 8.99'	E = 1.40'
CH. = 135.62'	CH. = 155.46'
CH. BR. = N 27° 44' 33" W	CH. BR. = N 15° 10' 40" W

REV. BY	DATE	DESCRIPTION
DATE COMPLETED	1/29/14	

HORIZONTAL SCALE IN FEET: 0, 10, 20, 40

PID NO. 88923

R/W DESIGNER DTB
R/W REVIEWER RSW

RIGHT OF WAY TOPO SHEET
STA. 12+50.00 TO STA. 16+50.00

HAS-22-17.24

7 / 10

48 / 51

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HAS-22-17.24
HARRISON COUNTY
CADIZ TOWNSHIP
SECTION 5 & 6, TOWNSHIP 10N., RANGE 5W.

LEAD-IN INFORMATION		
LEAD-IN (2-WDR)		
FROM: IRON PIN @ NW CORNER OF NW 1/4 OF SECTION 5		
COURSE	LENGTH	BEARING
1	1289.92'	S 89° 08' 54" E
LEAD-IN (3-WDR)		
FROM: IRON PIN @ SW CORNER OF SW 1/4 OF SECTION 6		
COURSE	LENGTH	BEARING
1	1289.92'	S 89° 08' 54" E
LEAD-IN (4-WDR)		
FROM: IRON PIN @ SW CORNER OF SW 1/4 OF SECTION 6		
COURSE	LENGTH	BEARING
1	1387.32'	S 89° 08' 54" E
LEAD-IN (5-WDR)		
FROM: IRON PIN @ NW CORNER OF NW 1/4 OF SECTION 5		
COURSE	LENGTH	BEARING
1	1357.52'	S 89° 08' 54" E

11+41.13, 1245.16' LT
PROPOSED ℄ R/W & CONST.
RELOCATED T.R. 243

SEC. 11 / SEC. 5 / SEC. 12 / SEC. 6

Δ = 01° 49' 04"
R = 2,132.10'
L = 67.64'
CH. BR. = N 16° 19' 45" W
CH. = 67.64'

Δ = 02° 02' 59"
R = 2,162.10'
L = 77.35'
CH. BR. = N 16° 12' 48" W
CH. = 77.34'

Δ = 02° 04' 15"
R = 2,162.10'
L = 78.14'
CH. BR. = N 14° 09' 11" W
CH. = 78.14'

S 89° 08' 54" E 1289.92'

SEC. 5 / SEC. 6

(2) NIRA C. EBERHART
P.N. 04-0000533.000
VOL. 194 PG. 480
43140 DENNISON AVE.
RESIDENTIAL

(3) LANDFILL RESOURCES, INC.
A DELAWARE CORPORATION
P.N. 04-0000032.002
VOL. 228 PG.634
VACANT LAND

PROPOSED V-DITCH W/TURF REINFORCING MAT, TYPE 3

17+71.97, 30.87' LT.
56+38.72, 30.00' LT.

19+55.00, 34.46' LT.
58+21.79, 30.00' LT.

S 73° 53' 17" W 47.99' (T)

PROPOSED ℄ R/W & CONST.
RELOCATED T.R. 243

AGGREGATE DRAINS (TYP.)

CONSTRUCTION LIMITS

EXISTING ℄ R/W
T.R. 243

PROPOSED 2' FLAT BOTTOM DITCH

N 08° 46' 12" W 145.20'

2-WDR
119,166 S.F.

S 08° 46' 12" E 242.05'

3-WDR
18,064 S.F.

S 17° 14' 17" E 183.07'

POT Sta. 56+18.72

POT Sta. 19+79.50
END FULL DEPTH PAVEMENT

EXISTING FIELD DRIVE (DIRT)

* EXISTING FENCE (REMOVED)

POT Sta. 59+23.18, EX. ℄ R/W T.R. 243 = Sta. 20+57.09, 6.46' LT. PROPOSED ℄ R/W & CONSTRUCTION T.R. 243

END R/W ACQUISITION
END WORK
STA. 20+50.00

N 17° 14' 17" W

N 16° 06' 43" W

19+55.00, 13.53' RT.
58+20.85, 17.98' RT.

EX. STONE PAVEMENT

MATCH LINE STA. 16+50, SEE SHEET 7

N 16° 06' 43" W 93.52'

PROPOSED ASPHALT PAVEMENT

N 16° 06' 43" W 205.01'

N 19° 08' 55" W 268.86'

* EXISTING FENCE (REMOVE)

S 17° 14' 17" E 106.87'

S 17° 14' 17" E 170.03'

S 19° 08' 55" E 193.75'

17+73.15, 29.12' RT.
56+38.72, 30.00' RT.

4-T
8968 S.F.

N 25°06'31" W 254.36'

5-WDR
33,363 S.F.

4-WDR
6955 S.F.

N 28° 18' 03" W 127.88'

N 26° 43' 54" W 81.39'

N 18° 47' 25" E 52.43'

S 23° 42' 24" E, 22.29'

16+50.00, 78.00' RT.
55+19.00, 79.89' RT.

N 23° 42' 24" W 83.64'

N 21° 31' 11" W 231.61'

19+80.00, 47.00' RT.
58+45.18, 51.94' RT.

S 73° 53' 17" W 9.52'

S 73° 53' 17" W 19.50' (T)

18+80.00, 17.51' RT.
57+45.78, 20.48' RT.

18+80.00, 27.02' RT.
57+45.60, 30.00' RT.

18+80.00, 37.00' RT.
57+45.40, 39.98' RT.

19+00.00, 62.00' RT.
57+64.90, 65.36' RT.

CONSTRUCTION LIMITS

5-T
5,405 S.F.

9.17'

20+50.00, 23.68' RT.
59+15.63 30.00' RT.

S 73° 53' 17" W 27.32'

20+50.00, 51.00' RT.
59+15.09, 57.31' RT.

EXISTING OVERHEAD ELECTRICAL LINES
(TO BE RELOCATED BY AEP)

N 60° 01' 52" W 37.48'

20+23.00, 77.00' RT.
58+87.59, 82.78' RT.

17+55.00, 64.00' RT.
56+20.44, 64.59' RT.

Δ = 02° 16' 30"
R = 2192.10'
L = 87.04'
CH. BR. = N 16° 06' 02" W
CH. = 87.04'

(5) LEONARD B. AKA LEONARD FERRARO
P.N. 05-0000496.000
VOL. 182 PG. 1727
VOL. 170, PG. 141
VACANT LAND

(4) R&F COAL COMPANY, AN OHIO LIMITED LIABILITY COMPANY, NOW KNOWN AS CAPSTONE HOLDING COMPANY, AN OHIO CORPORATION
VOL. 227 PG. 481
538 N. MAIN STREET
INDUSTRIAL

SECTION LINE 5 & 6 DETAIL
NOT TO SCALE

16+86.52, 27.77' RT.
55+53.25, 28.66' RT.
(4-WDR T.P.O.B.)

16+86.11, 29.11', RT.
55+52.87, 30.00' RT.

16+95.22, 0.74' LT.
55+61.38, ℄ (5-WDR T.P.O.B.)

17+04.33, 30.61' LT.
55+70.13, 30.00' LT.

PROPOSED ℄ R/W & CONST. RELOCATED T.R. 243

SEC. 5 / SEC. 6

TMP / R/W / I.P.S. / 9.17' / 33.39' / 49.44' / 14.64' / Ex R/W / 1.40' / O.H.P.L. / 29.80' / 31.23' / 12.15' / 67.60' / 24.22' / 1289.92' / SECTION 11 / SECTION 12

16+69.42, 83.83 RT.
55+40.23, 76.26' RT.

16+72.10, 75.05' RT.
55+37.87, 85.10' RT.

16+81.84, 43.11' RT.
55+48.96, 44.10' RT.

16+94.99, ℄
55+61.16, 0.74' RT.

EXISTING ℄ R/W T.R. 243

17+07.87, 42.23' LT.
55+73.60, 41.66' LT.

17+14.94, 65.40' LT.
55+80.63, 64.89' LT.
(2-WDR & 3-WDR T.P.O.B.)

LEGEND

I.P.S. — 2" ALUMINUM CAP STAMPED WITH "ODOT R/W" AND "T. KAMINSKI S7207"

* — DENOTES ENCROACHMENT

(T) — TOTAL DISTANCE OF COURSE

EXISTING GRAVEL ROAD TO BE REMOVED

XX — EASEMENTS PREVIOUSLY ACQUIRED WITH THE PLAN HAS-22-15.09 DATED 1960 ON FILE AT ODOT DISTRICT 11.

NOTE:
PROPOSED MONUMENT ASSEMBLY
19+00.00, ℄
57+66.12, 3.38' RT.

STATIONING NOTE:

STATIONING ESTABLISHED FROM EXISTING ℄ R/W T.R. 243

ALL OTHER STATIONING SHOWN WAS ESTABLISHED FROM PROPOSED ℄ R/W AND CONSTRUCTION RELOCATED T.R. 243

CURVE DATA
EXISTING ℄ R/W T.R. 243

(C9)

P.I. Sta. 55+61.01
Δ = 4° 07' 14" (LT)
Dc = 2° 39' 00"
R = 2,162.10'
T = 77.78'
L = 155.49'
E = 1.40'
CH. = 155.46'
CH. BR. = N 15° 10' 40" W

REV. BY	DATE	DESCRIPTION
DATE COMPLETED	1/29/14	

HORIZONTAL SCALE IN FEET
0 10 20 40

PID NO. 88923

R/W DESIGNER DTB
R/W REVIEWER RSW

RIGHT OF WAY TOPO SHEET
STA. 16+50.00 TO STA. 20+50.00

HAS-22-17.24

8 / 10

49 / 51

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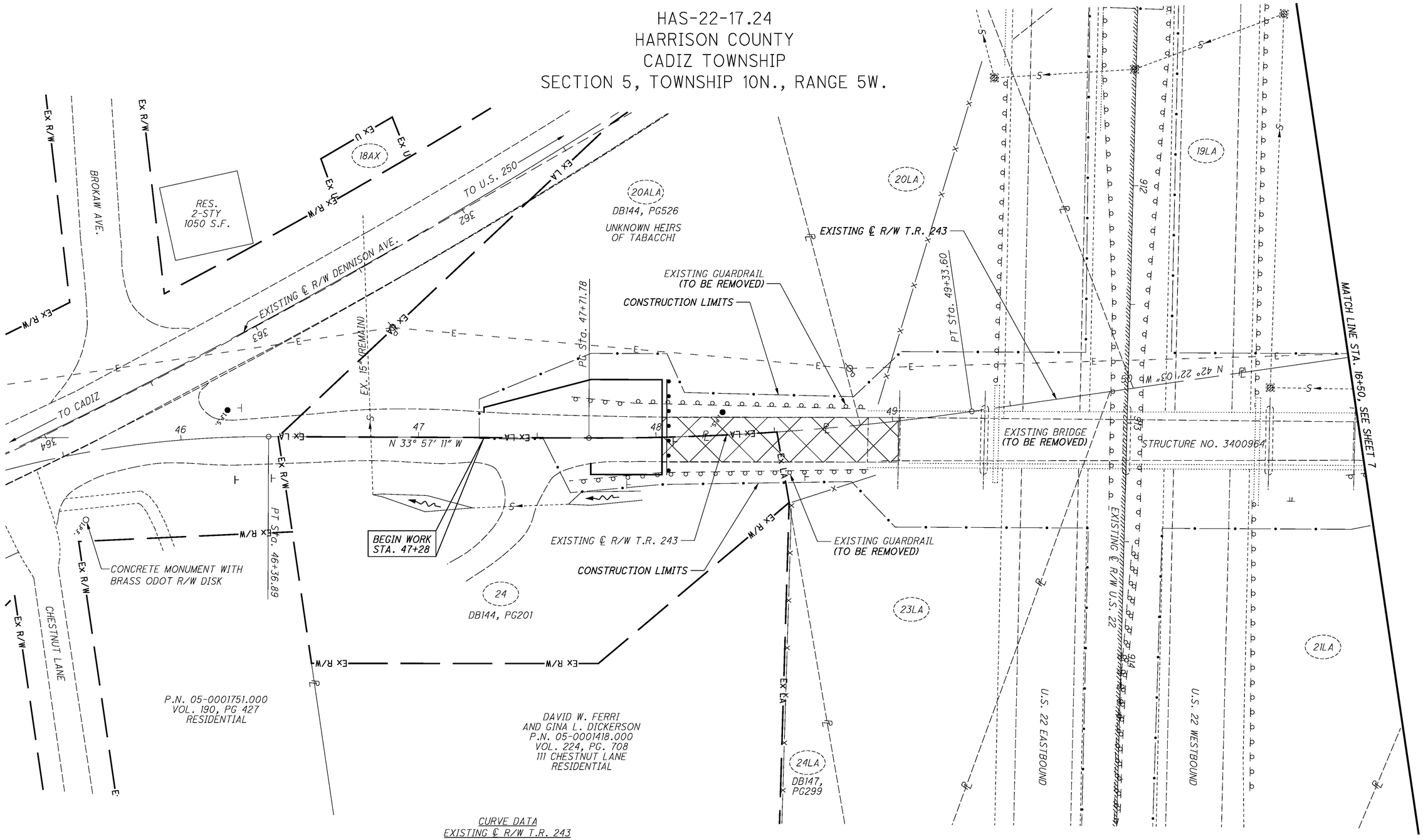
HAS-22-17.24
HARRISON COUNTY
CADIZ TOWNSHIP
SECTION 5, TOWNSHIP 10N., RANGE 5W.



CURVE DATA
EXISTING ℄ R/W T.R. 243

P.I. Sta. 45+47.92	P.I. Sta. 48+52.84
Δ = 24° 12' 33" (RT)	Δ = 8° 24' 52" (LT)
Dc = 13° 24' 00"	Dc = 5° 12' 00"
R = 427.58'	R = 1,101.84'
T = 91.70'	T = 81.05'
L = 180.66'	L = 161.82'
E = 9.72'	E = 2.98'
C = 179.32	C = 161.67'
C.B. = N 46° 03' 28" W	C.B. = N 38° 09' 37" W

EXISTING GRAVEL ROAD TO BE REMOVED

XX - EASEMENTS PREVIOUSLY ACQUIRED WITH PLAN HAS-22-15.09 DATED 1960 ON FILE AT ODOT DISTRICT 11.

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		1/29/14

HORIZONTAL SCALE IN FEET
0 10 20 40

PID NO. 88923

R/W DESIGNER DTB
R/W REVIEWER RSW

RIGHT OF WAY TOPO SHEET
STA. 12+93.00 TO STA. 16+50.00

HAS-22-17.24

9 / 10

50
51

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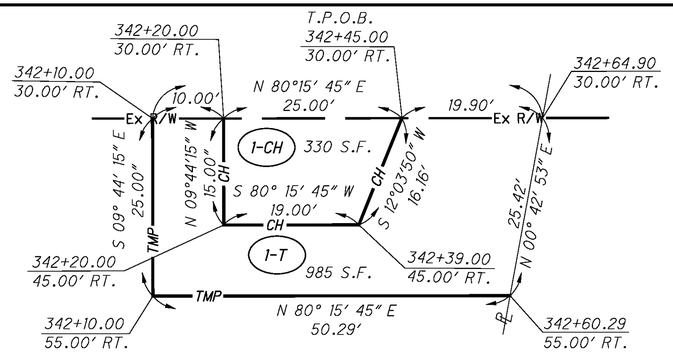
HAS-22-17.24
HARRISON COUNTY
CADIZ TOWNSHIP
SECTION 5 AND 11 TOWNSHIP 10N., RANGE 5W.



LEAD-IN INFORMATION		
LEAD-IN (1-CH)		
FROM: IRON PIN @ NE CORNER OF NE ¼ OF SECTION 11		
COURSE	LENGTH	BEARING
1	584.98'	S 00° 44' 56" W
2	59.41'	S 80° 48' 25" W
3	186.05'	S 80° 15' 45" W
4	30.00'	S 09° 44' 15" W

5/8" CAPPED IRON PIN FOUND (RLC 8220)
Sta. 11+41.13, 1245.16' LT. PROPOSED ℄ R/W & CONSTRUCTION RELOCATED T.R. 243
Sta. 345+71.08, 578.36' LT. EXISTING ℄ R/W DENNISON AVE. (CO. HWY. 11)

2 STORY RES.
1066 S.F.

GARAGE
1000 S.F.

EXISTING ASPHALT DRIVE

SECT. 12 — P.I. — SECT. 6
SECT. 11
SECT. 5

538.10'
S 00° 44' 56" W
584.98'

344+31.05, 55.00' LT.
CONCRETE MONUMENT
WITH BRASS ODOT
R/W DISK

P.O.C.
344+90.47
℄

Ex R/W

PROPOSED
21" CONDUIT,
TYPE C

55'

30'

EXISTING ASPHALT PAVEMENT

TO CADIZ

EX. 4"

EXISTING ℄ R/W
DENNISON AV E. (CO. HWY. 11)

Δ = 01° 05' 21"
R = 3125.23'
L = 59.41'
CH. BR. = S 80° 48' 25" W
CH. = 59.41'

SEE SHEET 6/10

DETAIL A
NOT TO SCALE

POT Sta. 341+37.14

50'

30'

TO U.S. 250

PROPOSED 24"
CONDUIT, TYPE B

342+45.00

S 09° 44' 15" E
30.00'

342+10.00

PROPOSED
21" CONDUIT,
TYPE B

EX. 24"

CONSTRUCTION LIMITS

342

343

344

345

35.00'

186.05'
N 80° 15' 45" E

EX. 4"

S 09° 44' 15" E
30.00'

21.19'

TMP

CH

SEE DETAIL A

PROPOSED
36" CONDUIT,
TYPE B

PC Sta. 344+31.05

88.24'

I STORY COMMERCIAL
4611 S.F.

SECT. 11
SECT. 5

EXISTING ASPHALT DRIVE

N 00° 42' 53" E 196.57'

STATIONING NOTE:

STATIONING ESTABLISHED FROM EXISTING
℄ R/W DENNISON AVE. (CO. HWY. 11)

1

DONALD E. EBERHART
P.N. 04-0000366.000
VOL. 29 PG. 763
42905 DENNISON AVE.
RESIDENTIAL

REV. BY	DATE	DESCRIPTION
DATE COMPLETED	1/29/14	

HORIZONTAL SCALE IN FEET
0 10 20 40

PID NO. 88923

R/W DESIGNER DTB
R/W REVIEWER RSW

RIGHT OF WAY TOPO SHEET
STA. 10+00.00 TO STA. 12+50.00

HAS-22-17.24

10 / 10

51 / 51

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PROJECT DESCRIPTION

REMOVE EXISTING STRUCTURE CARRYING TOWNSHIP ROAD 243 OVER US 22. REALIGN THE TOWNSHIP ROAD TO THE NORTH OF US 22 TO ACCESS DENNISON AVENUE WEST OF THE EXISTING BRIDGE LOCATION. THE PROPOSED STORM SEWER WILL BE CONSTRUCTED TO THE WEST ALONG THE NORTH SIDE OF DENNISON AVENUE TO OUTLET THE DRAINAGE FROM RELOCATED T.R. 243.

HISTORIC RECORDS

NO HISTORIC RECORDS WERE FOUND FOR THIS PROJECT.

GEOLOGY

THE PROJECT IS LOCATED WITHIN THE NON-GLACIATED MARIETTA PLATEAU NEAR THE TRANSITION WITH THE MUSKINGUM-PITTSBURGH PLATEAU. THE AREA IS CHARACTERIZED BY HIGH RELIEF DISSECTED TERRAIN WITH THE RESIDUAL SOILS ALONG THE RIDGES AND SLOPE AND THICKER COLLUVIAL SOILS AT THE BASE OF THE SLOPE. UNDERLYING THE SOILS THE BEDROCK IS COMPRISED OF PENNSYLVANIAN AGED SHALE, SILTSTONE, SANDSTONE, LIMESTONE AND COAL OF THE CONEMAUGH GROUP. OPEN SURFACE MINING OF COAL AND LIMESTONE IS COMMON THROUGHOUT THE AREA. RED SHALE AND CLAY WITH SLOPE INSTABILITY IS COMMON.

RECONNAISSANCE

A FIELD RECONNAISSANCE WAS COMPLETED BY PERSONNEL FROM DLZ, INC. ON JANUARY 17, 2013. THE EXISTING AREA WAS NOTED AS BEING A MIX OF WOODED AND GRASS FIELDS WHICH WERE STEEPLY SLOPING TO THE WEST. THE AREA BETWEEN CR 11, DENNISON AVE, AND TR 243, HESFORD RD., WAS NOTED AS BEING RECLAIMED SURFACE COAL MINE AREA WHICH WAS VEGETATED WITH GRASS, WEEDS, AND SMALL TREES. NORTHEAST OF TR 243 THE AREA WAS NOTED AS BEING GRASS PASTURE LAND. ALONG THE NORTH END OF TR 243, AT APPROXIMATELY PROPOSED STATION 17+00, EITHER SIDE OF THE ROADWAY IS HEAVILY WOODED.

SUBSURFACE EXPLORATION

SEVEN (7) BORINGS, B-001-0-12 THROUGH B-005-0-12, B-003-1-12 AND B-003-2-12, WERE COMPLETED AS PART OF THE SUBSURFACE EXPLORATION BETWEEN JANUARY 29 AND FEBRUARY 1, 2013. ALL BORINGS WERE DRILLED WITH A TRACK MOUNTED ROTARY DRILL RIG, USING 4-1/4 INCH I.D. HOLLOW STEM AUGERS TO ADVANCE THE BOINGS THROUGH THE SOIL OVERBURDEN. DISTURBED SAMPLES WERE COLLECTED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206) AT CONTINUOUS AND 2.5-FOOT INTERVALS. UNDISTURBED SOIL SAMPLES WERE COLLECTED AT THE DEPTHS SHOWN ON THE LOGS AND IN THE PROFILE, IN ACCORDANCE WITH AASHTO T207. THE HAMMER SYSTEM USED WAS LAST CALIBRATED IN JANUARY 7, 2010, AND THE AVERAGE DRILL ROD ENERGY RATIO (ER) IS 72.5.

BORINGS B-002-0-12, B-003-1-12, B-004-0-12 AND B-005-0-12 WERE ADVANCED INTO BEDROCK AND SAMPLED (AASHTO T225) USING AN N SERIES WIRELINE CORE BARREL, WATER METHOD.

EXPLORATION FINDINGS

THE BORINGS DISCLOSED WIDELY VARIABLE SUBSURFACE CONDITIONS ACROSS THE PROJECT LIMITS. AT THE GROUND SURFACE B-001-0 ENCOUNTERED 14 INCHES OF PAVEMENT MATERIALS WITH 22 INCHES OF AGGREGATE BASE, WITH THE REMAINING BORING ENCOUNTERED TOPSOIL RANGING IN DEPTH BETWEEN 4 AND 5 INCHES. B-001 WAS ONLY EXTENDED TO A DEPTH OF 10 FEET AND ENCOUNTERED SILTY CLAY (A-6a) SOILS IN VERY STIFF TO STIFF CONSISTENCY AND DAMP CONDITION WITH THE UPPER 1.5 FEET BEING CLASSIFIED AS FILL. NO BEDROCK WAS ENCOUNTERED. B-002 ENCOUNTERED BEDROCK IMMEDIATELY BENEATH TOPSOIL AND WAS SPLIT SPOON SAMPLED TO A DEPTH OF 24 FEET. COAL WAS REPORTED NEAR THE GROUND SURFACE AT ELEVATION 1249.2 FEET UNDERLAIN BY ALTERNATING LAYERS OF SHALE, SANDSTONE, AND SILTSTONE. IN THE VICINITY OF B-003 MINE SPOILS WERE ENCOUNTERED, SO AN OFFSET BORING WAS DRILLED RIGHT AND LEFT, B-003-1 AND B-003-2, RESPECTIVELY ALONG A CROSS SECTIONAL PROFILE. THE PROFILE INDICATED THAT FILL MATERIALS WERE ENCOUNTERED TO BETWEEN ELEVATION 1241.8 AND 1239.8 FEET. BEDROCK ENCOUNTERED CONSISTED OF SHALE IN B-003-0 AND B-003-2 WHICH WAS SPLIT SPOON SAMPLED. B-003-1 ENCOUNTERED COAL AT ELEVATION 1241.8, UNDERLAIN BY INTERBEDDED SHALE AND SANDSTONE TO ELEVATION 1227.3 BENEATH WHICH A DOLOMITE WAS ENCOUNTERED WHICH THE BORING WAS TERMINATED IN. THE FILL MATERIALS ASSOCIATED WITH THE MINE SPOILS WERE HIGHLY VARIABLE WITH NON-COHESIVE AND COHESIVE SOILS. NON-COHESIVE SOILS ENCOUNTERED CONSISTED OF STONE FRAGMENTS (A-1-a), STONE FRAGMENTS WITH SAND (A-1-b), STONE FRAGMENTS WITH SAND AND SILT (A-2-4) AND STONE FRAGMENTS WITH SAND, SILT AND CLAY (A-2-6) RANGING IN COMPACTNESS FROM VERY LOOSE TO DENSE. COHESIVE SOILS ENCOUNTERED CONSISTED OF SILT AND CLAY (A-6a), SILTY CLAY (A-6b), AND CLAY (A-7-6) FOUND IN SOFT TO MEDIUM STIFF CONSISTENCY. B-003-1 ENCOUNTERED A BOULDER AT ELEVATION 1272.8 WHICH WAS CORED. UNCONFINED COMPRESSIVE STRENGTH TESTING OF SILTY CLAY FILL WAS REPORTED IN B-003-2 INDICATED A STRENGTH OF 2400 PSF AT ELEVATION 1255.3 FEET. B-004 AND B-005 ENCOUNTERED COHESIVE SOILS BENEATH THE TOPSOIL RANGING FROM SILTY CLAY (A-6b) AND CLAY (A-7-6) IN VERY STIFF TO HARD CONSISTENCY. BEDROCK WAS ENCOUNTERED AT ELEVATION 1289.0 AND 1283.5 FEET, RESPECTIVELY CONSISTING OF LIMESTONE WITH SHALE LAYERS. UNCONFINED COMPRESSIVE TEST RESULT OF ROCK CORE SAMPLES ARE TABULARIZED AND PROVIDED. SEEPAGE WAS FIRST REPORTED IN B-003 AND B003-1 AT DEPTHS OF 38.5 AND 33.5 FEET, WITH REPORTED WATER LEVELS AT 32 AND 32.8 FEET PRIOR TO CORING. THE REMAINING BORINGS DID NOT HAVE A REPORTED WATER DEPTH PRIOR TO CORING. WITH THE RAPID CHANGE IN TOP OF ROCK BETWEEN THE CROSS SECTION WITH B-003 AND B-004 DRILLED WITHIN THE ROADWAY AND THE PAST LAND USAGE OF THE SURFACE MINING, THERE APPEARS TO BE AN EXPECTED HIGH WALL LOCATION WEST OF TR 243.

LEGEND

DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
GRAVEL AND/OR STONE FRAGMENTS	A-1-a	-	1
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-b	1	10
GRAVEL AND/OR STONE FRAGS. WITH SAND & SILT	A-2-4	1	-
GR. AND/OR ST. FRAGS. WITH SAND, SILT & CLAY	A-2-6	1	2
SILT AND CLAY	A-6a	3	4
SILTY CLAY	A-6b	5	23
CLAY	A-7-6	2	4
	TOTAL	13	44
COAL	VISUAL		
DOLOMITE	VISUAL		
SANDSTONE	VISUAL		
SHALE	VISUAL		
SILTSTONE	VISUAL		
WEATHERED LIMESTONE	VISUAL		
WEATHERED SANDSTONE	VISUAL		
WEATHERED SHALE	VISUAL		
PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	VISUAL		
SOD AND TOPSOIL = X = APPROXIMATE THICKNESS	VISUAL		

BORING LOCATION - PLAN VIEW.

DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.

WC INDICATES WATER CONTENT IN PERCENT.

N_{60} INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.

X/Y/D" NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (*SPT*):
X= NUMBER OF BLOWS FOR 6 INCHES (UNCORRECTED).
Y/D"= NUMBER OF BLOWS (UNCORRECTED) FOR D" OF PENETRATION AT REFUSAL.

W— INDICATES FREE WATER ELEVATION.

● INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.

* INDICATES A SAMPLE TAKEN WITHIN 3 FT OF PROPOSED GRADE.

TR INDICATES TOP OF ROCK.

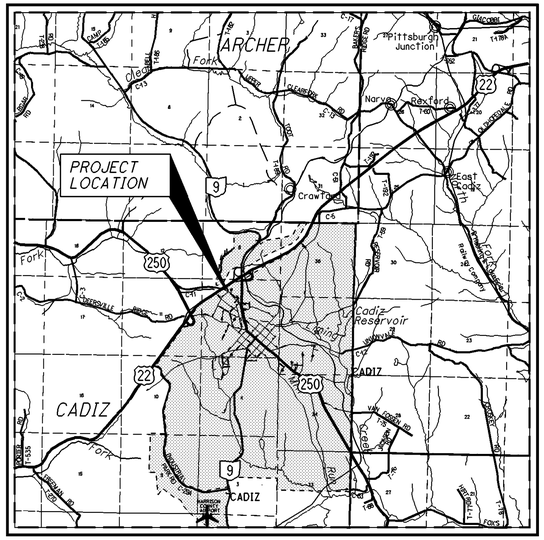
SS INDICATES A SPLIT SPOON SAMPLE.

ST INDICATES A SHELBY TUBE SAMPLE

NP INDICATES A NON-PLASTIC SAMPLE.

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JANUARY 20, 2012.



LOCATION MAP
SCALE IN MILES
0 1 2 3 4

N

PARTICLE SIZE DEFINITIONS

12"	3"	2.0 mm	0.42 mm	0.074 mm	0.005 mm
BOULDERS	COBBLES	GRAVEL	COARSE SAND	FINE SAND	SILT	CLAY
		No. 10 SIEVE	No. 40 SIEVE	No. 200 SIEVE	

INDEX OF SHEETS			
LOCATION FROM STA. TO STA.	PLAN VIEW SHEET	PROFILE SHEET	CROSS-SECTION SHEET
HESFORD ROAD 10+00 19+70	6	7	8

AVAILABLE INFORMATION

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

RECON. - DLZ 01/17/13
DRILLING - DLZ 01/29 TO 02/01/2013
DRAWN - GLM 03/2015
REVIEWED - PPP 03/2015

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF GEOTECHNICAL ENGINEERING
1980 W. BROAD ST. COLUMBUS, OH 43223

PID NO. 88923

SOIL PROFILE

HAS-22-17.24

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EXPLORATION NO. STATION & OFFSET	FROM	TO	SAMPLE ID	N60	% REC	tsf HP	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)
B-001-0-12	1.5	3	SS-1	10	17	-	20	32	25	16	7	28	24	4	18	A-1-b (0) *
STA. 9+97, 7' RT.	3	4.5	SS-2	23	33	-	29	15	11	27	18	37	25	12	16	A-6a (3) *
LATITUDE = 40.282649	4.5	6	SS-3	18	56	1.75	0	6	12	47	35	37	21	16	17	A-6b (10)
LONGITUDE = -81.006111	6	7.5	SS-4	27	6	1.00	SAME AS SS-3								44	A-6b (VISUAL)
	8.5	10	SS-5	7	67	1.00	SAME AS SS-3								51	A-6b (VISUAL)
B-002-0-12	1	2.5	SS-1	12	83	-	COAL, BLACK, SEVERELY WEATHERED								-	ROCK (VISUAL)
STA. 11+56, 5' RT.	3.5	5	SS-2	10	50	-	SAME AS SS-1								-	ROCK (VISUAL)
LATITUDE = 40.283068	6	7.5	SS-3	48	100	-	SHALE, ORANGISH BROWN, SEVERELY WEATHERED								-	ROCK (VISUAL)
LONGITUDE = -81.005971	8.5	9.4	SS-4	17/50/5"	45	-	SANDSTONE, LIGHT GRAY, HIGHLY WEATHERED								-	ROCK (VISUAL)
	11	12.5	SS-5	71	100	-	SHALE, BROWN TO GRAY, SEVERELY WEATHERED TO HIGHLY WEATHERED								-	ROCK (VISUAL)
	13.5	15	SS-6	92	100	-	SAME AS SS-5								-	ROCK (VISUAL)
	16	17.5	SS-7	79	100	-	SAME AS SS-5								-	ROCK (VISUAL)
	18.5	20	SS-8	50	100	-	SAME AS SS-5								-	ROCK (VISUAL)
	21	22.25	SS-9	41/41/50/3"	100	-	SANDSTONE, YELLOWISH GRAY, SEVERELY WEATHERED TO HIGHLY WEATHERED								-	ROCK (VISUAL) *
	23.5	23.75	SS-10	50/3"	33	-	SAME AS SS-9								-	ROCK (VISUAL)
B-003-0-12	1	2.5	SS-1	8	28	-	FILL: SOFT TO MEDIUM STIFF ORANGISH BROWN AND GRAY SILTY CLAY, SOME GRAVEL, SOME FINE TO COARSE SAND; CONTAINS ROCK FRAGMENTS; MOIST								16	A-6b (VISUAL)
STA. 13+75, 5' LT.																
LATITUDE = 40.283464	3.5	5	SS-2	5	83	-	SAME AS SS-1								16	A-6b (VISUAL)
LONGITUDE = -81.005399	6	7.5	SS-3	37	56	-	FILL: DENSE DARK GRAY GRAVEL WITH SAND, LITTLE TO SOME FINE TO COARSE SAND; CONTAINS BROKEN CARBONACEOUS SHALE FRAGMENTS; MOIST								11	A-1-b (VISUAL)
	8.5	10	SS-4	4	22	-	FILL: VERY LOOSE DARK GRAY GRAVEL, LITTLE FINE TO COARSE SAND; CONTAINS BROKEN CARBONACEOUS SHALE FRAGMENTS; MOIST								7	A-1-a (VISUAL)
	11	12.5	SS-5	7	89	-	FILL: LOOSE BLACK GRAVEL WITH SAND, SOME FINE TO COARSE SAND, LITTLE SILTY CLAY; CONTAINS COAL AND SHALE FRAGMENTS; MOIST								10	A-1-b (VISUAL)
	13.5	15	SS-6	7	100	-	SAME AS SS-5								9	A-1-b (VISUAL)
	16	17.5	SS-7	6	100	-	SAME AS SS-5								11	A-1-b (VISUAL)
	18.5	20	SS-8	5	67	-	FILL: SOFT BROWN SILTY CLAY, SOME FINE TO COARSE SAND, LITTLE GRAVEL; MOIST								15	A-6b (VISUAL)
	21	22.5	SS-9	10	100	-	FILL: MEDIUM DENSE DARK GRAY GRAVEL WITH SAND, LITTLE FINE TO COARSE SAND, TRACE SILTY CLAY; CONTAINS CARBONACEOUS SHALE FRAGMENTS; MOIST								11	A-1-b (VISUAL)
	23.5	25	SS-10	10	100	-	FILL: SOFT TO MEDIUM STIFF BROWN SILTY CLAY, SOME GRAVEL, SOME FINE TO COARSE SAND; CONTAINS COAL AND ROCK FRAGMENTS; DAMP								16	A-6b (VISUAL)
	26	27.5	SS-11	12	56	-	FILL: MEDIUM DENSE DARK GRAY GRAVEL WITH SAND, LITTLE FINE TO COARSE SAND, LITTLE SILTY CLAY; CONTAINS CARBONACEOUS SHALE; DAMP								11	A-1-b (VISUAL)
	28.5	30	SS-12	8	67	-	FILL: SOFT TO MEDIUM STIFF YELLOWISH BROWN SILTY CLAY, LITTLE TO SOME FINE TO COARSE SAND, TRACE TO LITTLE GRAVEL; DAMP								21	A-6b (VISUAL)
	31	32.5	SS-13	13	100	-	SAME AS SS-15								23	A-6b (VISUAL)
	33.5	35	SS-14	12	44	-	SAME AS SS-15								23	A-6b (VISUAL)
	36	37.5	SS-15	13	100	-	8	9	9	33	41	36	20	16	23	A-6b (10) *
	38.5	40	SS-16	22	44	-	56	15	9	8	12	28	18	10	15	A-2-4 (0) *
	41	41.8	SS-17	25/50/4"	80	-	SHALE, DARK GRAY, SEVERELY WEATHERED								11	ROCK (VISUAL) *
	43.5	43.83	SS-18	50/4"	50	-	SAME AS SS-17								9	ROCK (VISUAL)

DRAWN GLM | CHECKED PPP

SOIL PROFILE

SUMMARY OF SOIL TEST DATA

HAS-22-17.24

2 / 8

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EXPLORATION NO. STATION & OFFSET	FROM	TO	SAMPLE ID	N60	% REC	tsf HP	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)
B-003-1-12 STA. 13+64, 86' RT. LATITUDE = 40.283243 LONGITUDE = -81.005232	1	2.5	SS-1	10	56	2.50	FILL: VERY STIFF BROWN SILTY CLAY, SOME FINE TO COARSE SAND, SOME GRAVEL; CONTAINS ROCK FRAGMENTS; DAMP								18	A-6b (VISUAL)
	3.5	5	SS-2	12	56	2.5	SAME AS SS-1								17	A-6b (VISUAL)
	6	7.5	SS-3	4	67	1.00	FILL: MEDIUM STIFF GRAY SILTY CLAY, SOME FINE TO COARSE SAND, SOME GRAVEL; MOIST								20	A-6b (VISUAL)
	8.5	10	SS-4	2	17	1.00	FILL: MEDIUM STIFF TO STIFF BROWN SILTY CLAY, LITTLE FINE TO COARSE SAND, TRACE GRAVEL; MOIST								28	A-6b (VISUAL)
	11	12.33	SS-5	1/2/50/4"	19	1.25	SAME AS SS-4								19	A-6b (VISUAL)
	12.5	19.5	NO2-R-A	-	14	-	FILL: BOULDER WITH GRAVEL, CORED THROUGH BOULDER (12.0'-12.5')								-	A-1-a
	21	22.5	SS-6	10	22	-	FILL: MEDIUM STIFF TO STIFF BROWN AND GRAY SILT AND CLAY, SOME FINE TO COARSE SAND, SOME GRAVEL, CONTAINS ROCK FRAGMENTS; MOIST								16	A-6a (VISUAL)
	23.5	25	SS-7	8	100	0.75	26	15	10	24	25	35	20	15	18	A-6a (5)
	26	27.5	SS-8	45	22	-	SAME AS SS-7								13	A-6a (VISUAL)
	28.5	30	SS-9	7	33	-	SAME AS SS-7								14	A-6a (VISUAL)
	31	32.5	SS-10	10	56	-	43	21	9	14	13	33	21	12	11	A-2-6 (0)
	33.5	35	SS-11	13	17	-	FILL: LOOSE TO MEDIUM DENSE BROWN AND BLACK GRAVEL WITH SAND, SILT, AND CLAY; CONTAINS COAL AND SHALE FRAGMENTS; MOIST								16	A-2-6 (VISUAL)
	36	37.5	SS-12	14	56	-	FILL: STIFF BROWN SILTY CLAY, SOME FINE TO COARSE SAND, SOME GRAVEL; CONTAINS SHALE FRAGMENTS; MOIST TO WET								12	A-6b (VISUAL)
	38.5	40	SS-13	14	100	1.50	MEDIUM STIFF TO STIFF, BROWN TO GRAY, SILTY CLAY, LITTLE FINE TO COARSE SAND, TRACE GRAVEL; MOIST TO WET								24	A-6b (VISUAL)
	41	42.5	SS-14	14	100	0.50	SAME AS SS-13								21	A-6b (VISUAL)
	43.5	44.4	SS-15	35/50/5"	82	-	COAL, BLACK, SEVERELY WEATHERED								-	ROCK (VISUAL)
B-003-2-12 STA. 14+07, 93' LT. LATITUDE = 40.283679 LONGITUDE = -81.005559	1	2.5	SS-1	6	56	-	FILL: MEDIUM STIFF BROWN SILTY CLAY, LITTLE FINE TO COARSE SAND, TRACE GRAVEL; DAMP								25	A-6b (VISUAL)
	3.5	5	SS-2	14	17	-	FILL: MEDIUM DENSE DARK GRAY GRAVEL WITH SAND; DAMP (SHALE FRAGMENTS)								10	A-1-b (VISUAL)
	6	7.5	SS-3	30	100	-	FILL: VERY STIFF YELLOWISH BROWN TO BROWN SILTY CLAY, SOME FINE TO COARSE SAND, SOME GRAVEL; CONTAINS HIGHLY WEATHERED TO SEVERELY WEATHERED STONE FRAGMENTS; DAMP TO MOIST								14	A-6b (VISUAL)
	8.5	10	SS-4	10	56	-	SAME AS SS-5								8	A-6a (VISUAL)
	11	12.5	SS-5	8	83	-	22	13	9	33	23	33	21	12	11	A-6a (5)
	13.5	15	SS-6	8	33	-	FILL: LOOSE TO MEDIUM DENSE GRAY GRAVEL WITH SAND, LITTLE SILT, LITTLE CLAY; CONTAINS SEVERELY WEATHERED SHALE AND SILTSTONE FRAGMENTS; DAMP								8	A-1-b (VISUAL)
	16	17.5	SS-7	11	78	-	SAME AS SS-6								8	A-1-b (VISUAL)
	18.5	20	SS-8	8	11	-	SAME AS SS-6								7	A-1-b (VISUAL)
	21	22.5	SS-9	24	100	-	SAME AS ST-10								20	A-6b (VISUAL)
	23.5	25.5	ST-10	ST	63	-	5	10	9	31	45	38	20	18	21	A-6b (11)
	26	27.5	SS-11	10	100	-	SAME AS SS-14								20	A-7-6 (VISUAL)
	28.5	30	SS-12	8	100	-	SAME AS SS-14								18	A-7-6 (VISUAL)
	31	32.5	SS-13	12	100	-	SAME AS SS-14								21	A-7-6 (VISUAL)
	33.5	35	SS-14	10	100	-	20	5	4	20	51	57	21	36	30	A-7-6 (18)
	36	37.5	SS-15	5	61	-	SAME AS SS-14								33	A-7-6 (VISUAL)
	38.5	38.9	SS-16	50/5"	60	-	SHALE, BLACK, HIGHLY WEATHERED								-	ROCK (VISUAL)

DRAWN GLM | CHECKED PPP

SOIL PROFILE
SUMMARY OF SOIL TEST DATA

HAS-22-17.24

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EXPLORATION NO. STATION & OFFSET	FROM		TO	SAMPLE ID	N60	% REC	tsf HP	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)
B-004-0-12	0	-	1	SS-1A	2/4/50/5"	88	-	13	9	10	31	37	38	21	17	16	A-6b (9)
STA. 16+07, 16' LT.	1	-	1.4	SS-1B			-	LIMESTONE, ORANGISH LIGHT BROWN, HIGHLY WEATHERED								-	ROCK (VISUAL)
LATITUDE = 40.284018	1.5	-	1.7	SS-2	50/2"	59	-	SAME AS SS-1B								-	ROCK (VISUAL)
LONGITUDE = -81.005219																	
B-005-0-12	0	-	0.8	SS-1A	34	72		FILL: DENSE GRAY GRAVEL WITH SAND, SILT, AND CLAY CONTAINS SLAG; DAMP					27	16	11	7	A-2-6 (VISUAL) *
STA. 19+21, 11' RT.	0.8	-	1.5	SS-1B			4.50	SAME AS SS-3								11	A-7-6 (18)
LATITUDE = 40.284868	1.5	-	3	SS-2	11	67	4.50	5	2	5	27	61	52	23	29	22	A-7-6 (18)
LONGITUDE = -81.005418	3	-	4.5	SS-3	19	61	4.50	4	3	5	54	34	38	21	17	15	A-6b (11)
	4.5	-	6	SS-4	14	17	4.50	SAME AS SS-3								13	A-6b (VISUAL)
	6	-	7.5	SS-5	19	33	-	SAME AS SS-3								15	A-6b (VISUAL)

SOIL PROFILE
SUMMARY OF SOIL TEST DATA

DRAWN GLM | CHECKED PPP

HAS-22-17.24

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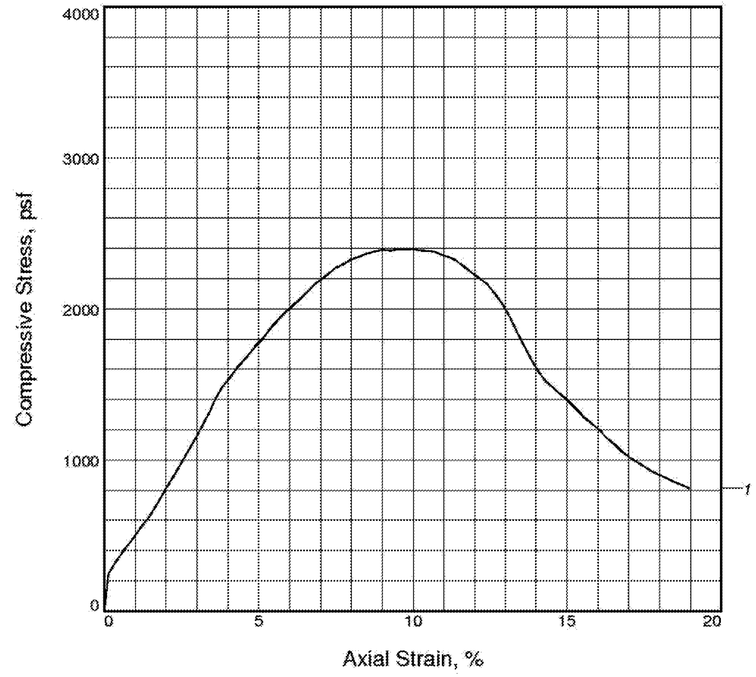
BEDROCK TEST SUMMARY			
BORING NO.	SAMPLE NO.	DEPTH	QU (PSI)
B-002-0-12	R-1	26.5' - 27.0'	3842
B-003-0-12	R-1	45.1' - 45.5'	4427
B-004-0-12	R-1	2.3' - 2.8'	18024

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psf	2398			
Undrained shear strength, psf	1199			
Failure strain, %	10.0			
Strain rate, in./min.	0.06			
Water content, %	21.8			
Wet density, pcf	127.5			
Dry density, pcf	104.6			
Saturation, %	96.5			
Void ratio	0.6107			
Specimen diameter, in.	2.85			
Specimen height, in.	5.54			
Height/diameter ratio	1.94			

Description: lean clay with sand

LL = 38	**PL =** 20	**PI =** 18	**Assumed GS=** 2.7	**Type:** Shelby Tube

Project No.: 1321-3001.00

Date Sampled: 2-8-13

Remarks:

Figure _____

Client: Euthenics

Project: HAS-22-17.24

Source of Sample: B-003-2-12 **Depth:** 23.0'-25.0'

Sample Number: ST-1

DLZ

DRAWN GLM | CHECKED PPP

SOIL PROFILE

SOIL & BEDROCK UNCONFINED COMPRESSIVE TEST

HAS-22-17.24

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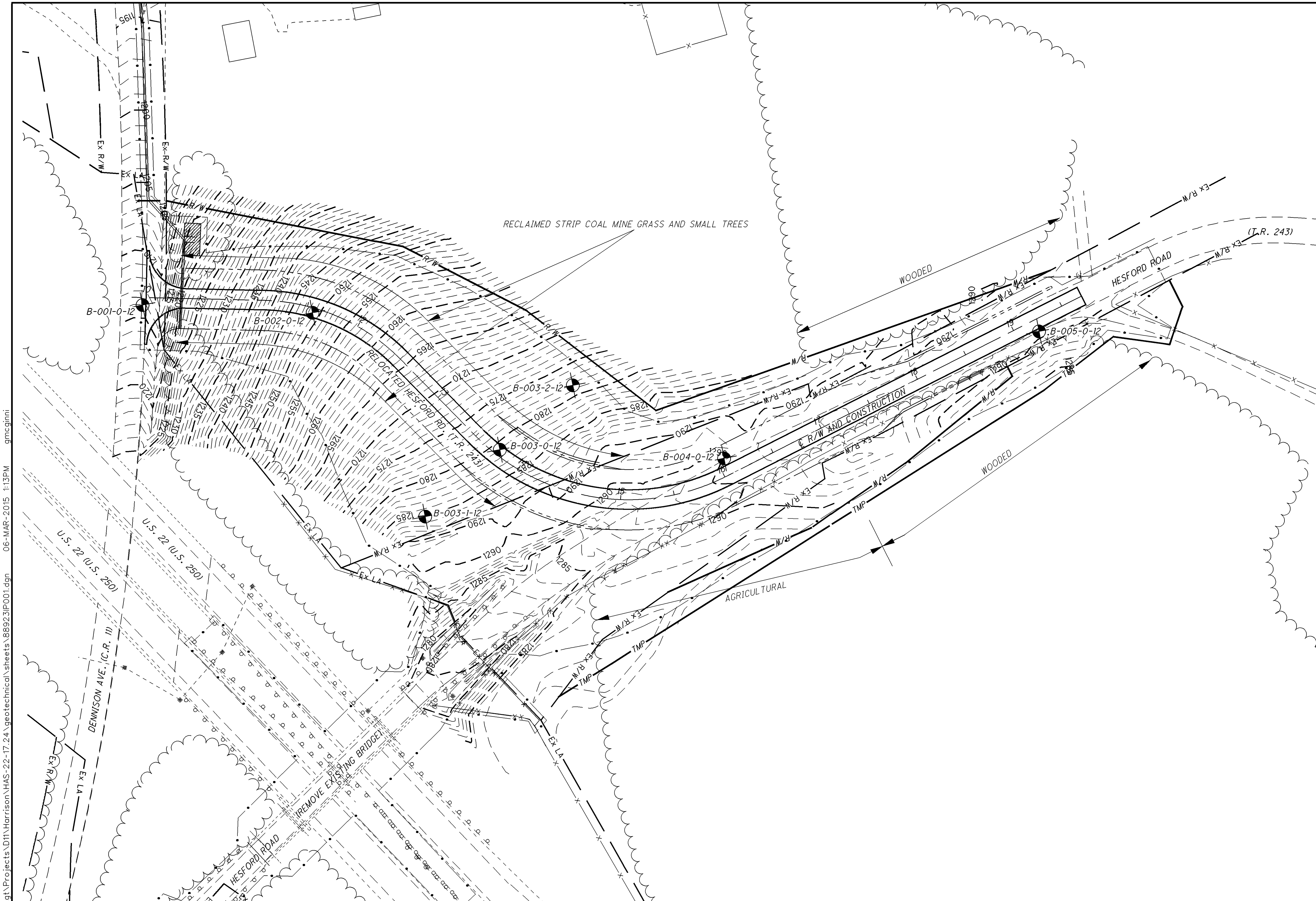

N

0 20 40 80
HORIZONTAL
SCALE IN FEET

DRAWN
GLM
CHECKED
PPP

SOIL PROFILE
PLAN - STA. 10+00 TO STA. 19+70

HAS-22-17.24

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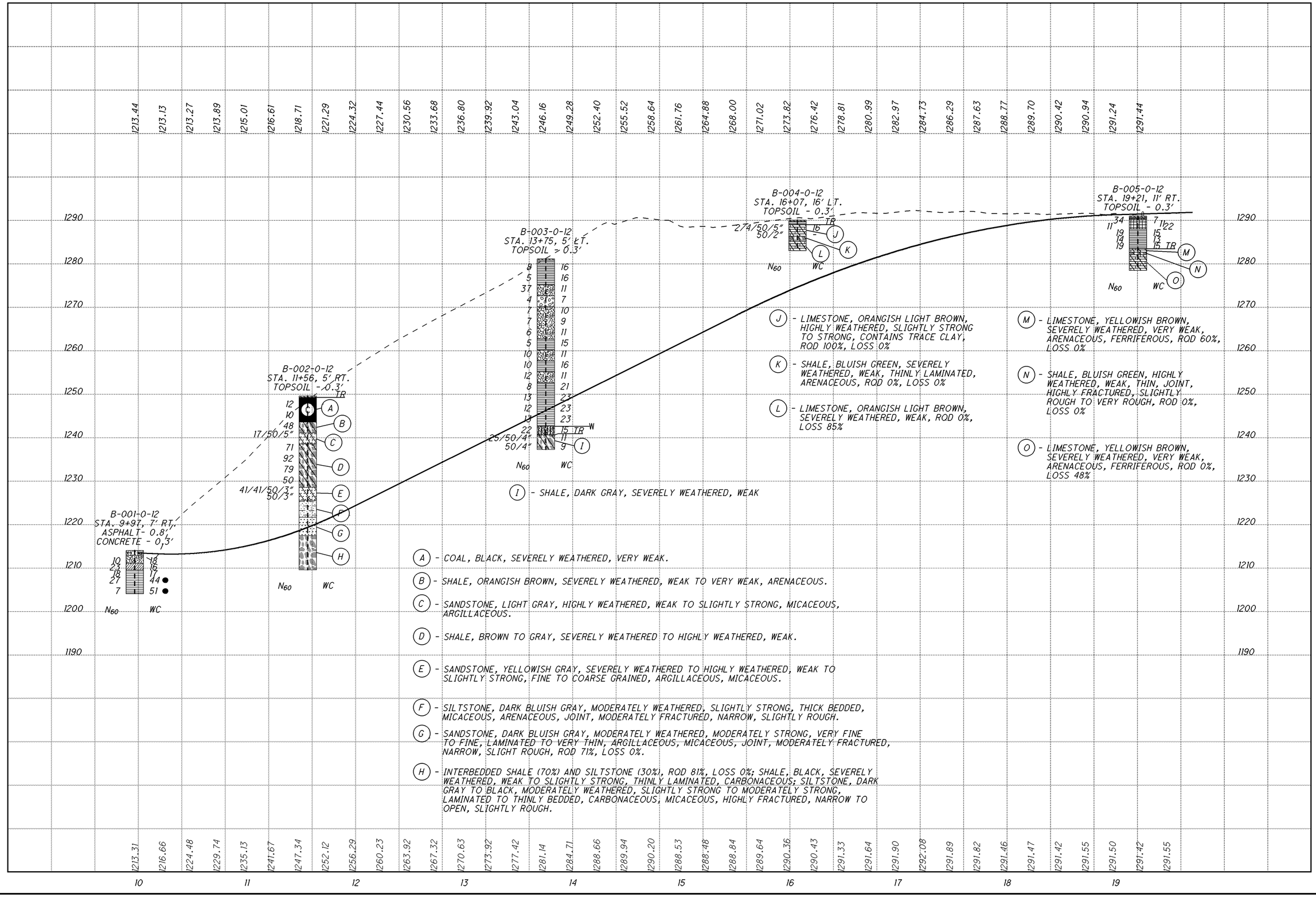

0 20 40 80
HORIZONTAL SCALE IN FEET

DRAWN GLM
CHECKED PPP

SOIL PROFILE - STA. 10+00 TO STA. 19+70

PROFILE - HAS-22-17.24

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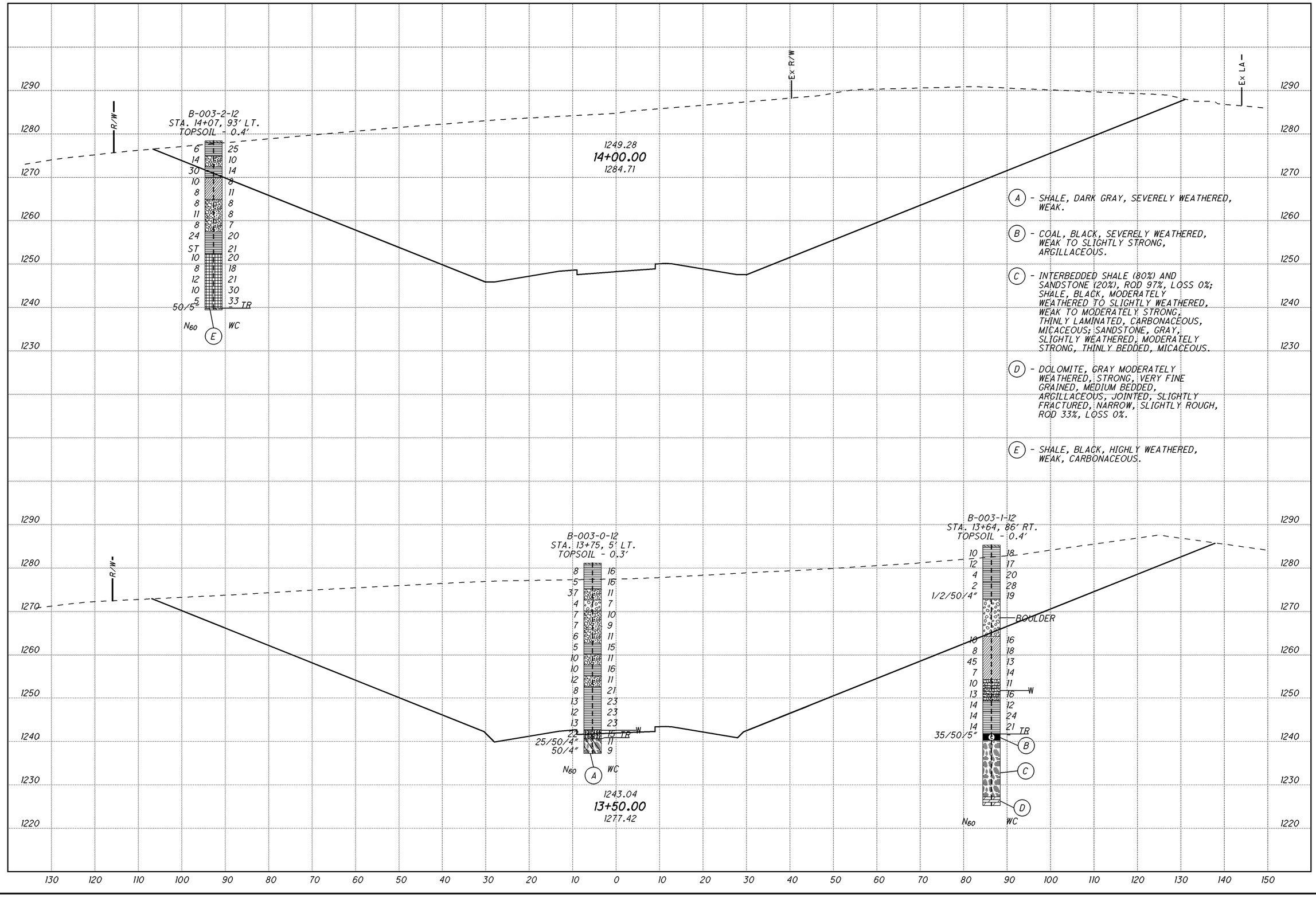

HORIZONTAL SCALE IN FEET
0 5 10 20

DRAWN GLM
CHECKED PPP

SOIL PROFILE
CROSS SECTIONS STA. 13+50 & STA. 14+00

HAS-22-17.24

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