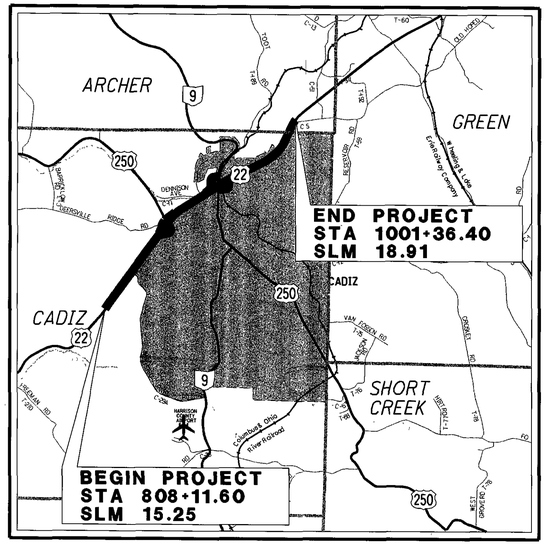


LOCATION MAP

LATITUDE: N40°16'55" LONGITUDE: W81°00'25"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED

INTERSTATE & DIVIDED HIGHWAY

UNDIVIDED STATE & FEDERAL ROUTES

OTHER ROADS

DESIGN DESIGNATION

	SLM 15.25-16.64	SLM 16.64-17.49	SLM 17.49-18.91
CURRENT ADT (2007)	2220	5260	6360
DESIGN YEAR ADT (2019)	2660	6510	7280
DESIGN HOURLY VOLUME (2019)	293	716	801
DIRECTIONAL DISTRIBUTION	53%	51%	55%
TRUCKS (24 HOUR B&C)	22%	36%	33%
DESIGN SPEED	55 MPH	55 MPH	55 MPH
LEGAL SPEED	55 MPH	55 MPH	55 MPH

DESIGN FUNCTIONAL CLASSIFICATION:
RURAL PRINCIPAL ARTERIAL

NHS PROJECT 15.25-16.56 NO
16.56-18.91 YES

DESIGN EXCEPTIONS

	APPROVAL DATE	SHEET NO.
SHOULDER WIDTH	12-18-06	4

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 PROTECTIVE
SERVICE CALL: **1-800-929-0988**

PLAN PREPARED BY:

O.D.O.T.
DISTRICT 11
NEW PHILADELPHIA, OHIO

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

HAS-22-15.25

CADIZ & ARCHER TOWNSHIPS

HARRISION COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION

RESURFACING 3.66 MILES OF U.S. 22 INCLUDING REBUILT SHOULDER, REBUILT GUARDRAIL, PAVEMENT MARKINGS, AND RUMBLE STRIPS.

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

LIMITED ACCESS

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

2005 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.

ENGINEERS SEAL:

STATE OF OHIO
SCOTT K. WARNER
65533
REGISTERED PROFESSIONAL ENGINEER

SIGNED: Scott K Warner
DATE: 2-9-07

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	7-16-04			MT-35.10	4-20-01	MT-105.10	10-18-02	TC-41.20	1-19-01	800	1-19-07
BP-9.1	4-15-05			MT-95.30	9-5-06	MT-105.11	10-18-02	TC-42.10	1-19-07	832	4-25-06
								TC-42.20	7-16-04		
GR-1.1	7-16-04	DM-4.3	7-19-02	MT-98.12	4-19-02			TC-52.10	1-19-07		
GR-2.1	1-16-04	DM-4.4	7-19-02	MT-98.13	4-19-02			TC-52.20	1-19-07		
GR-3.1	1-19-07			MT-98.14	4-19-02			TC-61.10	1-19-01		
GR-3.2	1-19-07			MT-98.15	7-16-04			TC-65.10	1-21-05		
GR-4.2	1-19-07			MT-98.16	4-19-02			TC-65.11	1-21-05		
GR-5.1	4-18-03			MT-98.17	10-18-02			TC-71.10	1-19-07		
GR-5.3	1-16-04			MT-98.18	10-18-02			TC-72.20	1-21-05	**SPECIAL PROVISIONS**	
GR-6.1	4-18-03							TC-73.10	1-19-01		
GR-6.2	4-18-03			MT-99.20M	1-30-95						

APPROVED Richard A Bibler PE
DATE 2/12/07 DISTRICT DEPUTY DIRECTOR

APPROVED Keith C. Swearingen
DATE 2-28-07 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E070(542)

PID NO. 75408

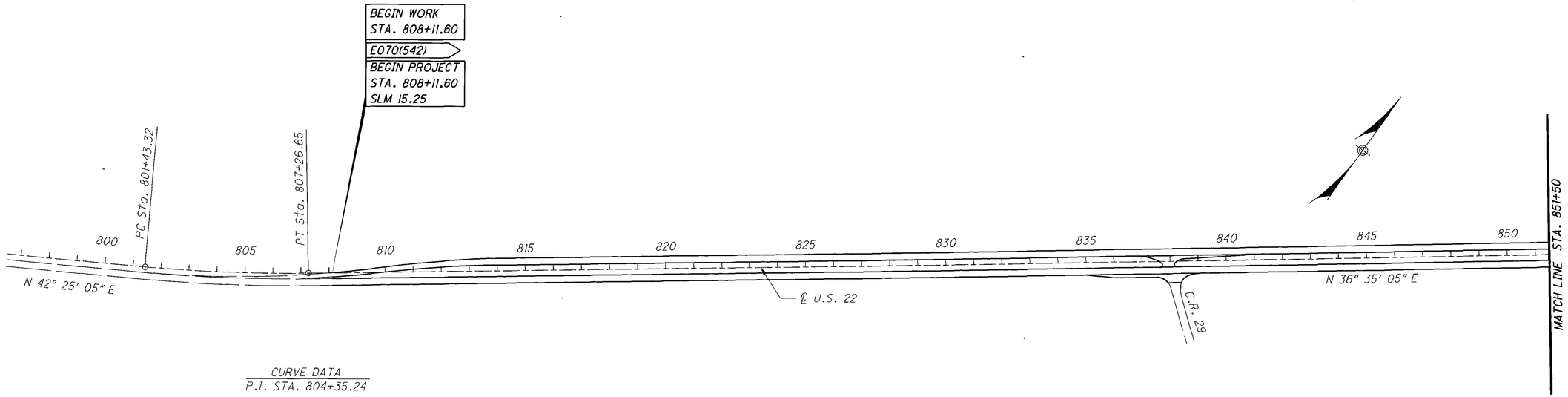
CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

HAS-22-15.25

HAS - USR 22 - 15.25
070244 PID - 75408
Dist 11 5/16/2007
I:\PROJECTS\75408\dgn\gt100.dgn 09-FEB-2007 12:16PM swarner

For U.S. 250 Interchange Curve Data see Sheet 21.



CURVE DATA
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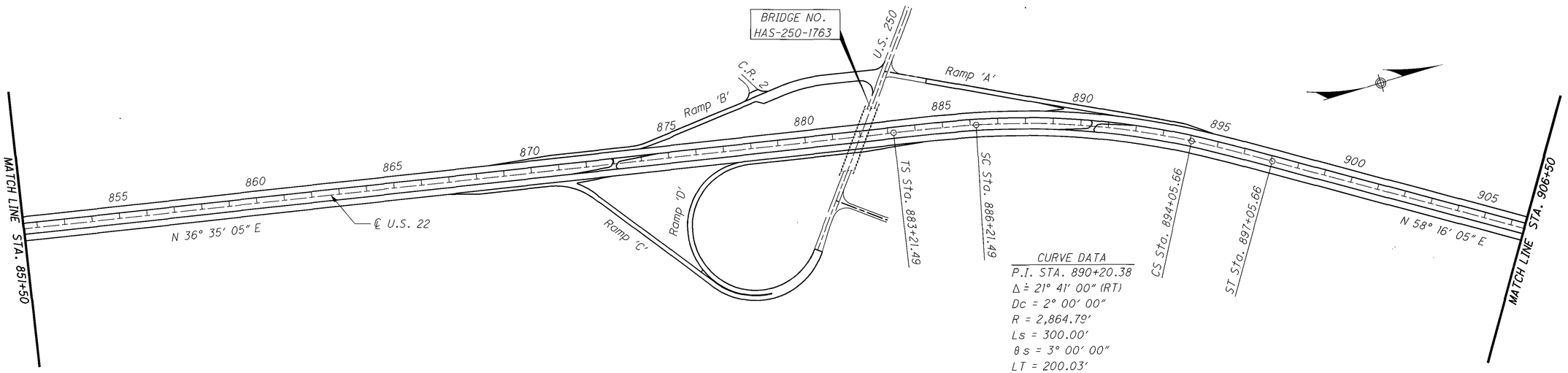
R = 5,729.58′
T = 291.92′
L = 583.33′
E = 7.43′



CURVE DATA
P.I. STA. 890+20.38
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Dc = 2° 00′ 00″
R = 2,864.79′
Ls = 300.00′
θs = 3° 00′ 00″
LT = 200.03′
ST = 100.03′
x = 299.92′
y = 5.23′
k = 149.99′
p = 1.31′
Δc = 15° 41′ 00″ (RT)
Lc = 784.17′
Ts = 698.89′
Es = 53.40′

HORIZONTAL SCALE IN FEET
0 100 200 400

CALCULATED ANS
CHECKED SKW

SCHEMATIC PLAN
STA. 796+50 TO STA. 906+50

HAS-22-15.25

2
31

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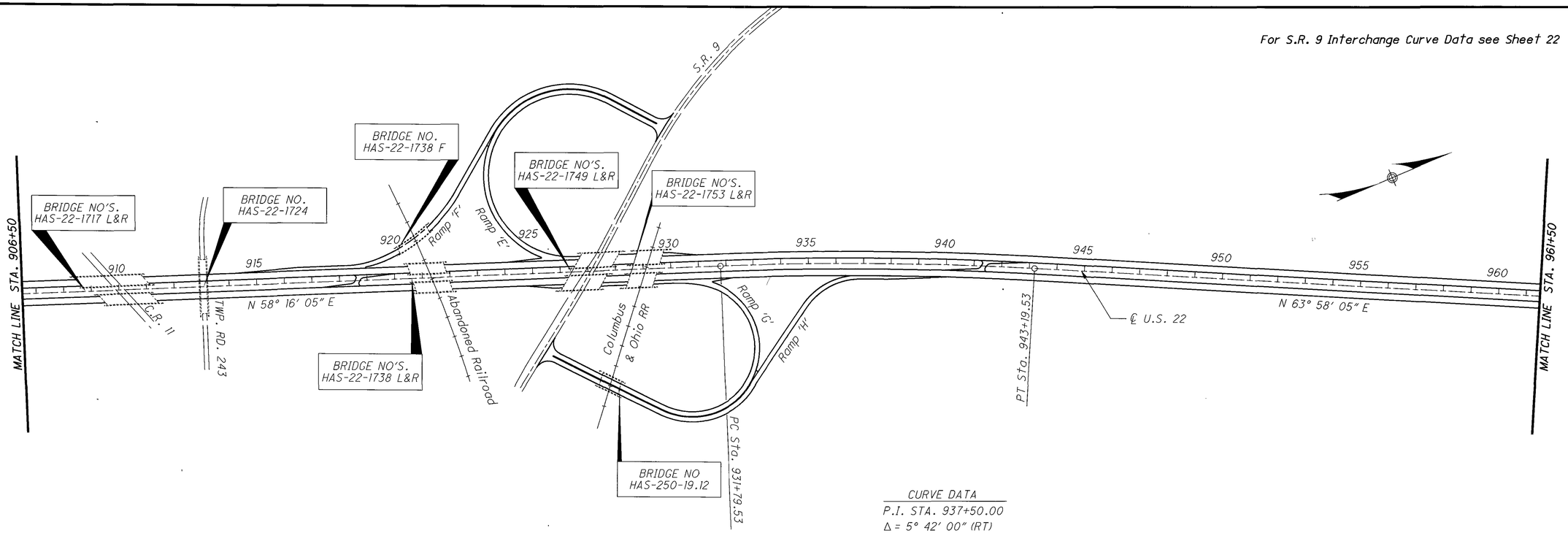
For S.R. 9 Interchange Curve Data see Sheet 22



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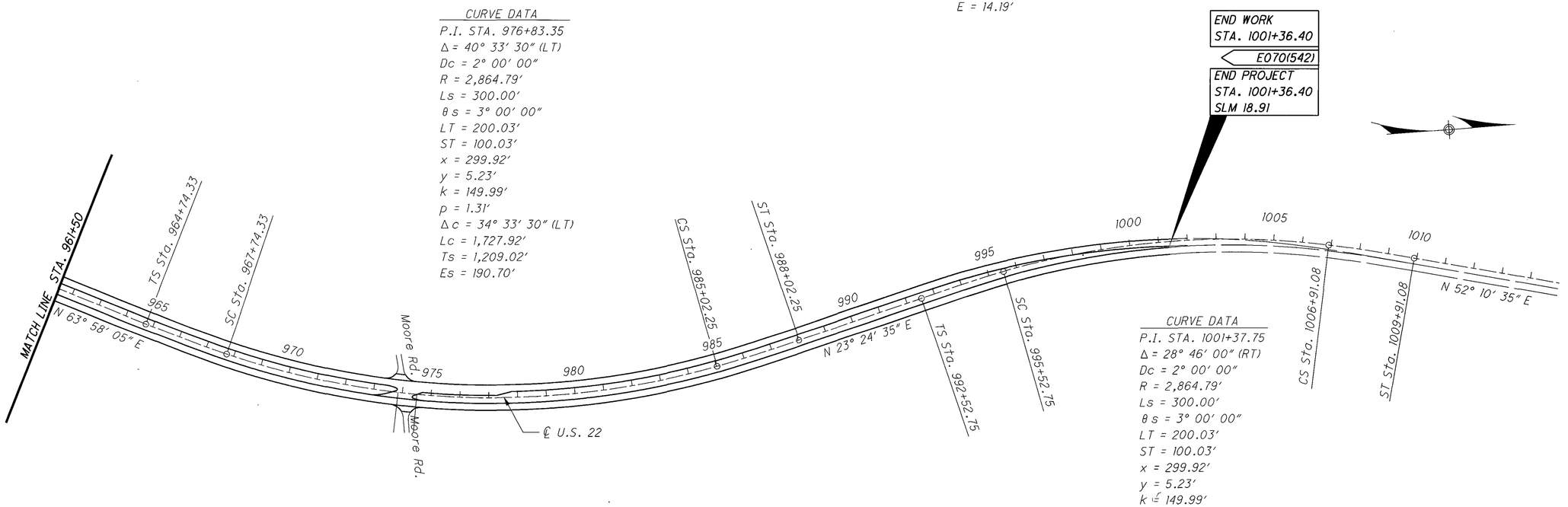
Dc = 0° 30' 00"
R = 11,459.16'
T = 570.47'
L = 1,140.00'
E = 14.19'

CURVE DATA
P.I. STA. 976+83.35
Δ = 40° 33' 30" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
Ls = 300.00'
θ s = 3° 00' 00"
LT = 200.03'
ST = 100.03'
x = 299.92'
y = 5.23'
k = 149.99'
p = 1.31'
Δ c = 34° 33' 30" (LT)
Lc = 1,727.92'
Ts = 1,209.02'
Es = 190.70'



CURVE DATA
P.I. STA. 1001+37.75
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Dc = 2° 00' 00"
R = 2,864.79'
Ls = 300.00'
θ s = 3° 00' 00"
LT = 200.03'
ST = 100.03'
x = 299.92'
y = 5.23'
k = 149.99'
p = 1.31'
Δ c = 22° 46' 00" (RT)
Lc = 1,138.33'
Ts = 885.00'
Es = 94.05'

HORIZONTAL SCALE IN FEET
0 100 200 400
CALCULATED ANS
CHECKED SKW

SCHEMATIC PLAN
STA. 906+50 TO STA. 1015+00

HAS-22-15.25

3
31

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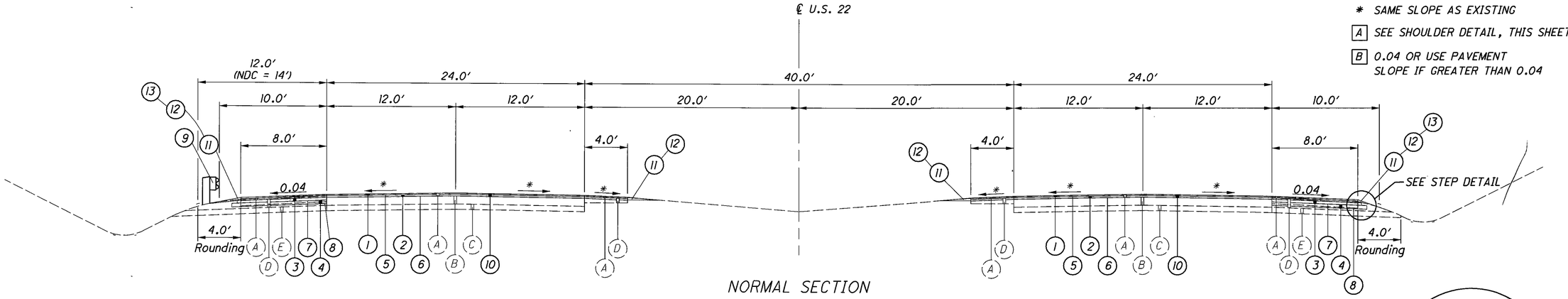
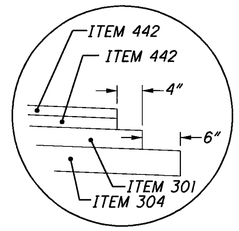


NORMAL SECTION



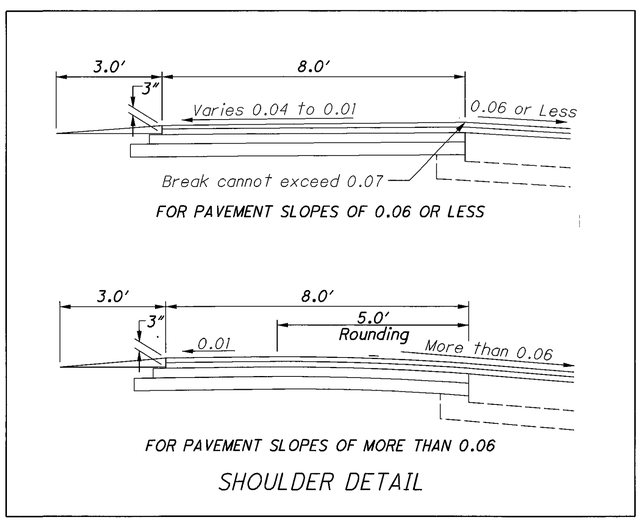
STEP DETAIL

SUPERELEVATED SECTION

LEGEND

1. ITEM 442 - 1½″ ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN
2. ITEM 442 - 1¾″ ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE B (446)
3. ITEM 301 - 3″ ASPHALT CONCRETE BASE, PG64-22
4. ITEM 304 - 4″ AGGREGATE BASE
5. ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (0.04 GAL./S.Y.)
6. ITEM 407 - TACK COAT (0.075 GAL./S.Y.)
7. ITEM 408 - PRIME COAT (0.40 GAL./S.Y.)
8. ITEM 204 - SUBGRADE COMPACTION
9. ITEM 606 - GUARDRAIL, TYPE 5 OR 5A, AS PER PLAN
10. ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (3″ NOMINAL DEPTH)
11. ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN
12. ITEM 209 - LINEAR GRADING, AS PER PLAN
13. ITEM 408 - PRIME COAT, AS PER PLAN

- A — EXISTING ASPHALT CONCRETE
- B — ±9″ REINFORCED CONCRETE
- C — EXISTING SUBBASE
- D — BITUMINOUS AGGREGATE BASE
- E — AGGREGATE DRAINS
- F — EXISTING SHALLOW UNDERDRAINS
- G — AGGREGATE BASE
- H — EXISTING CONCRETE MEDIAN



SHOULDER DETAIL

CALCULATED ANS
CHECKED SKW

TYPICAL SECTIONS

HAS-22-15.25

4
31

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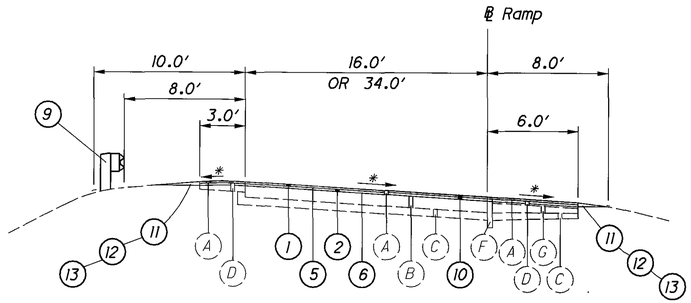
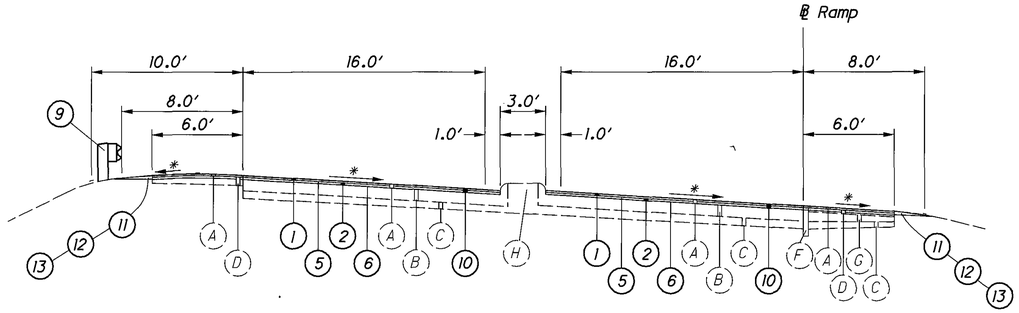
* SAME SLOPE AS EXISTING

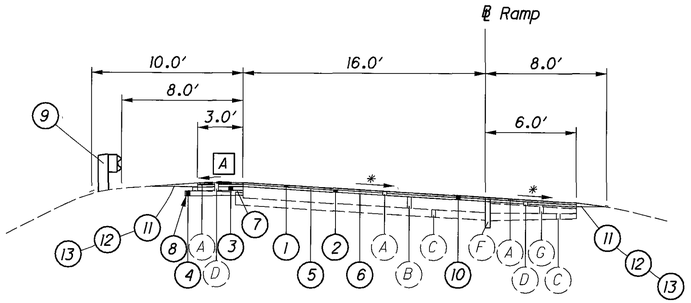
[A] SEE SHOULDER DETAIL, THIS SHEET



STANDARD RAMPS

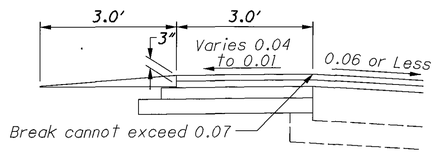


TWO-WAY RAMPS

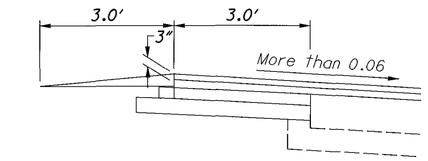


U.S. 250 INTERCHANGE RAMP 'D'

STA. 4+86.20 TO STA. 8+18.89 = 332.69 FT.



FOR PAVEMENT SLOPES OF 0.06 OR LESS



FOR PAVEMENT SLOPES OF MORE THAN 0.06

SHOULDER DETAIL

For Legend see Sheet 4.

CALCULATED ANS
CHECKED SKW

TYPICAL SECTIONS

HAS-22-15.25

GENERAL NOTES

ROUNDING

The rounding at slope breakpoints shown on the Typical Sections apply 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.

Verizon
Attn: Jennifer Lofton
6223 Norwalk Road
Medina, Ohio 44256
330-364-0501

AEP Ohio Power Company
Attn: Jeff Turner
P. O. Box 99
47687 National Road
St. Clairsville, Ohio 43950
740-699-7845

The Honorable Don Bethel
Attn: Tom Carter, Water Supt.
Village of Cadiz
128 Court Street
Cadiz, Ohio 43907
740-922-3884

Consolidation Coal Company
Attn: Electric Superintendent
79285 Cadiz-New Athens Road
Cadiz, Ohio 43907
740-942-4392

There are no underground utilities shown on this plan. The nature of the work required by this project will not affect any known underground utilities that exist under or adjacent to the work area.

CONTINGENCY QUANTITIES

The Contractor shall not order materials or perform work for items designated by plan note to be used "as directed by the Engineer" unless authorized by the Engineer. The actual work location and quantities used for such items shall be incorporated into the final change order governing completion of this project.

WORK LIMITS

The work limits shown on these plans are for the physical construction only. The installation and operation of all work zone traffic control and work zone traffic control devices required by these plans shall be provided by the Contractor whether inside or outside these work limits.

PROFILE AND ALIGNMENT

The work proposed by this project includes grinding of the existing pavement. The alignment and superelevation rates of the existing pavement will not be changed and the profile of the proposed surface will be similar to that of the existing pavement except that it will be raised as shown in the typical sections. Previous construction plans showing the original alignment and profile are listed below.

PREVIOUS CONSTRUCTION PLANS

The following previous construction plans, which show the original alignment and profile, are available for inspection at the ODOT District 11 office:

HAS-22-15.09 Original Construction Plan, 1959
HAS-22-15.03 Resurfacing and Upgrading Plan, 1978
HAS-22-15.03 Resurfacing, 1991
HAS-22-15.25 Resurfacing, 2000
HAS-22-17.48 Bridge Redecking, 2000

SAME SEASON COMPLETION OF SURFACE COURSE

Any length of resurfacing work started in a construction season shall have the surface course placed that same season.

ITEM 201 - 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 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 mm, TYPE B (446), AS PER PLAN

Materials furnished for fine and coarse aggregates used in this item shall exclude all stone and crushed carbonate stone.

ITEM 408 - PRIME COAT, AS PER PLAN

The Contractor will apply "MC-70" at a rate of 0.4 gallons per square yard, or as determined by the Engineer, to the completed aggregate shoulder. A shield shall be provided to prevent the spraying or drifting of liquid bituminous material onto the edge of the pavement or edge line. The attention of the Contractor is directed to 107.10 of the specifications.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

Graded shoulders shall be reshaped as per the requirements of Item 617, Compacted Aggregate. The contractor will utilize material (i.e. grindings) obtained from the pavement planing asphalt concrete operation. This material will be placed in lieu of the compacted aggregate. If the amount of grindings material is not sufficient to cover the compacted aggregate quantity in this plan, then additional material meeting specifications 617 shall be used. All specifications for Item 617 regarding placement apply. Grindings need to be of a size that can be incorporated into the shoulders.

ITEM 209 - LINEAR GRADING, AS PER PLAN

Graded shoulders shall be reshaped as directed by the Engineer to ensure a smooth drainable surface that is free of all irregularities. Vegetation, material buildup, and collected debris on the shoulder or within the linear grading limits shall be removed and disposed of by the Contractor as specified in section 209.01, or wasted over fill slopes at the direction of the Engineer.

This item shall meet the requirements of Item 209 Linear Grading except as follows:

The cost for storing the grindings on the project until placing them on the shoulders shall be included in the unit price bid for Item 209 Linear Grading, As Per Plan.

This item will require a trench of 3" from the top of the proposed surface course to allow for the backfill of Item 617-Compacted Aggregate, as per plan.

All equipment, materials, and labor required to perform the work outlined above shall be included for payment under Item 209, Linear Grading, As Per Plan.

ITEM 202 - RAISED PAVEMENT MARKER REMOVED

Existing raised pavement markers shall become the property of the Contractor for disposal off the project. The requirement to fill the depressions shall be waived. The following quantity has been carried to the General Summary to remove existing raised pavement markers:

Item 202, Raised Pavement Marker Removed - - - - - - - - 688 Each

COORDINATION OF RESURFACING AND PLANING OPERATIONS

The pavement planing and resurfacing operation shall be completed in a timely manner as directed by the Engineer. The grindings shall become the property of the Contractor with the exception that some grindings will be utilized by the Contractor as noted in the plans, and that the following quantities are to be delivered by the Contractor at his expense to the following location:

6000 Tons delivered to:

Harrison County Garage
43041 South Industrial Park Rd.
Cadiz, Ohio 43907

The Contractor will supply all labor and equipment to stockpile the material in a manner acceptable to the Engineer. Continuous end dumping will not be permitted. For additional information contact the Harrison County Manager at (740) 942-3274.

CONVERSION OF METRIC STANDARD DRAWINGS

The metric standard drawings referenced in this plan shall be converted to English units using the SI (Metric) to English Conversion Factors provided in Section 109.02 of the 2005 Construction and Material Specifications. Conversions shall be appropriately precise and shall reflect standard industry English values where suitable.

ITEM 620 - DELINEATOR, TYPE C, POST MOUNTED
ITEM 620 - DELINEATOR, TYPE D, POST MOUNTED

The following locations and quantities have been designated for the placement of Item 620 - Delineators.

	Type C	Type D
Ramp D Sta. 0+00 to Sta. 4+24 Lt.	9	
Ramp D Sta. 5+13 to Sta. 8+19 Lt.		7
Ramp D Sta. 0+00 to Sta. 5+13 Rt.	11	
Ramp E Sta. 0+00 to Sta. 6+82 Lt.	14	
Ramp E Sta. 0+00 to Sta. 6+82 Rt.	14	
Ramp E Sta. 6+82 to Sta. 11+99 Rt.		11
TOTAL	48	18

The following estimated quantity have been carried to the General Summary:

Item 620 - Delineator, Type C, Post Mounted - - - - - - - 48 Each
Item 620 - Delineator, Type D, Post Mounted - - - - - - - 18 Each

ITEM 620 - DELINEATOR REMOVED FOR DISPOSAL

Existing delineators shall become the property of the Contractor for disposal off the project. The following quantity has been carried to the General Summary to remove existing delineators:

Item 620 - Delineator Removed For Disposal - - - - - - - - 100 Each

CENTERLINE REFERENCE MONUMENTS

Existing centerline monuments are located at the stations shown below. The Contractor shall take care not to disturb any of these centerline reference monuments.

LOCATION

P.O.T. - 782+00
P.C. - 801+43.32
P.I. - 804+35.24
P.I. - 807+26.65
P.O.T. - 810+76.79
P.O.T. - 825+79.25
P.O.T. - 829+67.82
P.O.T. - 842+50
P.O.T. - 854+39.75
P.O.T. - 870+72.08
T.S. - 883+21.49
P.I. - 890+20.38
C.S. - 894+05.66
S.T. - 897+05.66
P.O.T. - 901+42.22
P.O.T. - 914+12.95
P.O.T. - 921+08.03
P.C. - 931+79.53
P.I. - 937+50
P.T. - 943+18.53
P.O.T. - 952+50
T.S. - 965+74.33
S.C. - 967+74.33
P.I. - 976+83.35
P.O.C. - 978+50
C.S. - 985+02.25
S.T. - 988+02.25
T.S. - 992+52.75
S.C. - 995+52.75
P.I. - 1001+37.75
P.O.C. - 1004+50

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

This item shall consist of furnishing and installing either of the following guardrail end terminals, or an approved equal as listed on Roadway Engineering's Web Page at WWW.DOT.STATE.OH.US/DRRC/ under roadside safety devices for approved guardrail end treatments:

1). The ET-2000 (1997) manufactured by Trinity Industry, 1170 N. State Street, Girard, Ohio 44420 (Telephone: 330-545-4373).

The length of the ET-2000 (1997) system is considered to be 50'-0", inclusive of two 25'-0" long rail elements. Installation shall be at the locations specified in the plans, in accordance with the manufacturer's specifications as detailed on the following pre-approved shop drawings:

Dwg. #	Drawing Name	Dwg./Rev. Date	ODOT Approval Date
SS265M	ET-2000 (1997) Plan, Elevation & Sections	6/20/97	3/6/98
SS142	E2000 PLUS 50'-0" Plan, Elevation & Sections 25'-0" Rail, Sleeve w/PL Posts 1-4	4/12/00	7/31/00
SS141	ET2000 PLUS Plan, Elevation & Sections 25'-0" Rail, HBA Posts 1-4	2/29/00	7/31/00
SS158	ET2000 PLUS 50'-0" With 12'-6" Rail, HBA Posts 1-4 Plan, Elevation & Sections	5/22/00	7/31/00

2). The SKT-350 manufactured by Road Systems, Inc., 2516 Mallory Lane, Stow, Ohio 44224 (Telephone: 330-346-0721).

The length of the SK-350 system is considered to be 50'-0", inclusive of four 12'-6" long rail elements. Installation shall be at the locations specified in the plans, in accordance with the manufacturer's specifications as detailed on the following pre-approved shop drawings:

Dwg. #	Drawing Name	Dwg./Rev. Date	ODOT Approval Date
SKT-4M	Sequential Kinking Terminal (SKT-350) Assembly with 4 foundation tubes	12/11/97	3/6/98

The face of the Type E-98 impact head shall be covered with a sheet of Type G Reflective Sheeting, per CMS 730.19, approximately 18" x 18".

Refer to manufacturer's instruction regarding the installation of, and the grading around, the foundation tubes and ground strut. The top of any foundation tube should be less than 4-inches above the ground. The placement of the foundation tubes should be an appropriate depth below the level line in order to maintain the finished guardrail height of 27¾" from the edge of the shoulder.

On-site grading is required if the top of the foundation tubes or top of the ground strut does project more than 4-inches above the ground line.

Payment for the above work shall be made at the unit price bid for Item 606, Anchor Assembly, Type E-98, Each, and shall include all labor, tools, equipment and materials necessary to construct a complete and functional anchor assembly system, including all related transitions, reflective sheeting, hardware, grading, embankment and excavation not separately specified, as required by the manufacturer.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

When it is necessary to splice proposed guardrail to existing guardrail, only the existing guardrail shall be cut, drilled, or punched. The connection shall be made using a "W-Beam Rail Splice" as shown in AASHTO M 180. Payment shall be included in the contract price for the respective guardrail items.

ITEM 606 - IMPACT ATTENUATOR, TYPE I-98 (BIDIRECTIONAL)

This item shall consist of furnishing and installing either of the following impact attenuators, or an approved equal as listed on Roadway Engineering's Web Page at WWW.DOT.STATE.OH.US/DRRC/ under roadside safety devices for approved impact attenuators:

1). The C-A-T manufactured by Trinity Industry, 1170 N. State Street, Girard Ohio 44420 (Telephone: 330-545-4373).

The length of the C-A-T system is considered to be 31'-3"long. Installation shall be at the locations specified in the plans, in accordance with the manufacturer's specifications as detailed on the following pre-approved shop drawings:

Dwg. #	Drawing Name	Dwg./Rev. Date	ODOT Approval Date
SS245M	Crash-Cushion Attenuating Terminal Plan, Elevation & Sections for use as a Longitudinal Median Barrier Terminal or Crash Cushion Attenuator	4/10/97 Rev. 4	3/6/98
SS224M	C-A-T Transition to Median Barrier Guardrail Plan, Elevation & Sections	4/26/96	3/6/98
SS226M	C-A-T Transition to Vertical Wall or Pier Plan, Elevation & Sections	4/26/96	3/6/98

2). The Breakmaster manufactured by Energy Absorption Systems, Inc., One East Wacker Drive, Chicago, IL 60601 (Telephone: 312-467-6750).

The length of the Breakmaster System is considered to be 32'-8" long. Installation shall be at the locations specified in the plans, in accordance with the manufacturer's specifications as detailed on the following pre-approved shop drawings:

Dwg. #	Drawing Name	Dwg./Rev. Date	ODOT Approval Date
92-00-02	Brakemaster General Assembly (Bidirectional System)	3/10/97 Rev. K	3/6/98
92-00-82	Brakemaster (Bidirectional) with Foundation Tubes	2/9/98	3/6/98
9202024	Anchor Assembly, Foundation Tube, 6½Ft., BRS	6/12/97 Rev. D	3/6/98

3). The FLEAT-MT manufactured by Road Systems, Inc. (RSI), 3616 Old Howard County Airport Road, Big Springs, TX, 79720 (Telephone: 915-263-2435) and available from RSI's list of approved distributors.

The length of the FLEAT-MT System is considered to be 37'-6" long. Installation shall be at the locations specified in the plans, in accordance with the manufacturer's specifications as detailed on the following pre-approved shop drawings and the manufacturers installation manual:

Dwg. #	Drawing Name	Dwg./Rev. Date	ODOT Approval Date
MEDFLT-W-US	Flared Energy Absorbing Terminal - FLEAT-MT Assembly for Wood Breakaway Post System	4/10/02 Rev. 5	1/6/03
MEDFLT-S-US	Flared Energy Absorbing Terminal - FLEAT-MT Assembly for Steel Breakaway Post System	4/10/02 Rev. 6	1/6/03

The face of the Type I-98 impact head shall be covered with a sheet of Type G reflective sheeting, per CMS 730.19, approximately 36" x 12" (one 9" x 18" for each FLEAT-MT impact head). Payment for the above work shall be made at the unit price bid for Item 606, Impact Attenuator, Type I-98 (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.

GUARDRAIL PLACEMENT

No hazard shall be left unprotected except for the actual time necessary to remove the existing guardrail, prepare the site, and install new guardrail in a continuous operation. The removal of all guardrail shall at all times be as directed by the Engineer. No guardrail shall be removed until the replacement material is on the site, ready for installation. Failure to comply with this requirement shall be deemed sufficient cause to order work suspended until such time as the Engineer is assured of compliance.

ITEM 606 - GUARDRAIL, TYPE 5, AS PER PLAN
ITEM 606 - GUARDRAIL, TYPE 5A, AS PER PLAN

All holes remaining after removal of guardrail posts shall be backfilled with granular material and compacted. Fill material containing sod shall not be used. All fill material shall be approved by the Engineer. Material placed in holes shall be thoroughly compacted and leveled off as directed by the Engineer.

All excess material excavated for post holes or concrete anchors not used as described above shall be removed and disposed of in accordance with 203.04 of the Specifications, and the area restored to a neat condition satisfactory to the Engineer.

Payment for any such work required will be considered as incidental and included in Item 606 - Guardrail, Type 5 or 5A, As Per Plan.

ITEM 603 - 4" CONDUIT, TYPE F

The following estimated quantity has been carried to the General summary for the replacement of damage drainage conduit at locations as directed by the Engineer.

Payment for the above work shall be made at the unit price bid for Item 603 - 4" Conduit, Type F and shall include all labor, tools, equipment, and materials.

Item 603, 4" Conduit, Type F - - - - - - - - - - 400 ft.

ADDITIONAL MAINTENANCE OF TRAFFIC NOTES

TRENCH FOR WIDENING

Trench excavation for base widening shall be only on one side of the pavement at a time. The open trench shall be adequately maintained and protected with drums or barricades at all times. Placement of proposed subbase and base material shall follow as closely as possible behind excavation operations. The length of widening trench which is open at any one time shall be held to a minimum and shall at all times be subject to approval of the engineer.

OVERNIGHT TRENCH CLOSING

The base widening shall be completed to a depth of no more than 5 inches below the existing pavement by the end of each work day. No trench shall be left open overnight except for a short length (25 feet or less) of a work section at the end of the trench. In case work must be suspended because of inclement weather or other reasons, the trench for the uncompleted base widening shall be backfilled at the direction of the Engineer.

CALCULATED ANS CHECKED SKW

GENERAL NOTES

HAS-22-15.25

MAINTAINING TRAFFIC, AS PER PLAN

The Contractor shall maintain traffic at all times in accordance with the requirements of CMS Item 614, these maintenance of traffic notes and details, the Standard Construction Drawings, and the traffic control details described in these plans.

The minimum of one lane in each direction with a width of 11 feet shall be maintained at all times for traffic control. It is the responsibility of the Contractor to organize his work in such a manner to provide the most safety with the least inconvenience to the traveling public.

The Contractor is responsible for designing the maintenance of traffic scheme. The Contractor shall submit, in writing, this maintenance of traffic scheme and a schedule of operations to the Engineer and receive approval before work is started on the project.

Any open pavement trench or dropoff shall be adequately maintained and protected. The protection used shall meet the requirements of the dropoffs in work zones sheet included in this plan.

Under no circumstances shall the Contractor be permitted to have work zones which alternately close both the passing and travel lane unless the distance between the lane restrictions exceeds 2 miles.

The Contractor shall be responsible for smooth and orderly flow of traffic through the project area 24 hours per day for the duration of the project. This consists of notifying the Ohio State Patrol after encountering any accidents or disabled vehicles or objects hindering the flow of traffic.

The Contractor shall designate to the Engineer a person responsible for maintenance of traffic control during non-work hours who shall be available within (30) minutes after notification.

Payment for providing watchmen, furnishing, erecting, maintaining and removing signs, cones, markers, special lighting, floodlighting, work zone pavement markings, work zone raised pavement markers, etc., shall be included in the lump sum price bid for Item 614 Maintaining Traffic, As Per Plan.

The Contractor shall furnish, install and maintain all additional signs or other traffic control devices as required above. All costs involved in furnishing, installing and maintaining these devices shall be included in the lump sum price bid for Item 614, Maintaining Traffic, As Per Plan.

Unless the Engineer deems it physically impossible, all construction equipment shall exit all work zones from the downstream end of the work zone or by interchange ramps. Under no circumstances shall the Contractor be permitted to directly transport or operate any equipment across the open lanes of the roadway.

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.

The planing and resurfacing will proceed continuously a minimum of five (5) days per week, weather permitting, excepting holidays and events listed below:

No work shall be performed and all existing lanes shall be open to traffic during the following designated holidays and events:

Memorial Day — Fourth of July
Labor Day — Thanksgiving
Harrison County Fair (Friday 7/13/07 after 4 p.m., 7/14/07 & 7/15/07)

The period of time that the lanes are to be opened 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 the week	Time all lanes must be opened 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 Monday
Friday	12:00N Thursday through 12:00N Monday
Saturday	12:00N Friday through 12:00N Monday

MAINTAINING TRAFFIC, AS PER PLAN cont.

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.

All work and traffic control devices shall be in accordance with 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, As Per Plan, unless separately itemized in the plan.

NOTIFICATION OF WORK ZONE LANE RESTRICTIONS

The Contractor shall notify the Engineer at least eighteen (18) days prior to implementing any work zone restriction that will reduce the width or vertical clearance of any lane on which traffic will be maintained during construction. The Engineer shall immediately notify the District Roadway Services Manager to advise the Office of Highway Management of the restrictions.

CONTRACTOR'S EQUIPMENT - OPERATION AND STORAGE

In addition to the requirements of section 614.03 of the Construction and Material Specifications the following shall apply. The Contractor's equipment shall be operated in the direction of traffic 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.

Equipment may be parked in areas along the highway, thirty feet (30') from the edge of traveled highway unless behind guardrail, 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 removed from the interstate route right of way. No equipment shall be parked in the median of the highway. Adequate barricades and light 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.

MOVEMENT OF DRUMS

The row of drums along a closed lane shall be moved out of the open lane onto the new pavement as soon as paving operations permit.

WORK ZONE PAVEMENT MARKINGS

The Contractor shall be required to install work zone markings.

Work zone pavement markings shall be 642 paint.

Prior to placement of any work zone pavement markings, the Contractor shall completely obliterate, as per 641.10, all existing pavement markings that would create confusion or conflict with the work zone pavement markings.

Work zone raised pavement markers cannot be used to simulate (replace) any type of work zone pavement marking. Quantites for Work Zone Pavement markings can be found on sheet 29.

FLOODLIGHTING

Floodlighting of the work site for operations conducted during night time 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 throughout 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, As Per Plan.

COORDINATION OF RESURFACING AND PLANING OPERATIONS

The pavement planing and resurfacing operation shall be completed in a timely manner. The 446 Intermediate course shall be placed no more than four (4) calendar days after reaching the final milled surface.

DROPOFFS IN WORK ZONES

The wedge treatment as detailed in the "Dropoffs in Work Zones" sheet will be required and shall be included in the lump sum bid for Item 614 - Maintaining Traffic, As Per Plan.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR

In addition to the requirements of 614 and the latest edition of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD), a uniformed law enforcement officer and an official patrol car with working top-mounted emergency flashing lights shall be provide for controlling traffic for the following tasks:

1). Planing and paving operations on ramps and speed change lanes as directed by the Engineer.

2). For any operation or location directed by the Engineer.

Law Enforcement Officers (LEO's) should not be used where the OMUTCD intends that flaggers be used. The LEO's are considered to be employed by the Contractor, and the Contractor shall be responsible for their actions. Although they are employed by the Contractor, the project Engineer shall have control over their placement. The official patrol car shall be a public safety vehicle as required by the Ohio Revised Code.

The Contractor shall make arrangements for these services with:

Steubeville Patrol Post
1377 Cadiz Road
Wintersville, OH 43953
Ph. (740) 264-1641

Law Enforcement Officers with patrol car required by the traffic maintenance tasks above shall be paid for on an hourly basis under Item 614, Law Enforcement Officer with Patrol Car. The following estimated quantity has been carried to the general summary:

Item 614, Law Enforcement Officer with Patrol Car - - - - - - 300 Hour

The hours paid shall include minimum show-up time required by the law enforcement agency involved.

If the Contractor wishes to utilize LEO's for flagging and traffic control other than that required in these plans, he may do so at his own expense. Payment for the excess above the contract requirements will be included under Item 614, Maintaining Traffic, As Per Plan.

ITEM 614 - WORK ZONE INCREASED PENALTIES SIGN

R11-H5a-48 signs shall be furnished, erected, and maintained in good condition and/or replaced as necessary and subsequently removed by the Contractor. Signs shall be mounted at the appropriate offsets and elevations as prescribed by the Ohio Manual of Uniform Traffic Control Devices. They shall be maintained on supports meeting current safety criteria.

The signs may be erected or uncovered no more than four hours before the actual start of work. The signs shall be removed or covered no later than four hours following restoration of all lanes to traffic with no restrictions, or sooner as directed by the Engineer. Temporary sign covering and uncovering due to temporary lane restorations shall be guided by the four-hour limitations stated above. Such lane restorations should be expected to remain in effect for 30 or more consecutive calendar days, such as during winter shut-downs.

The signs shall be dual mounted. The first sign shall be placed between the "ROAD WORK AHEAD" (W20-1) sign and the next sign in the sequence. Signs shall be erected on each entrance ramp and every 2 miles through the construction work limits.

The Contractor may use signs and supports in used, but good, condition provided the signs meet current ODOT specifications. Sign faces shall be reflectorized with Type G sheeting complying with the requirements of CMS 730.19.

Work zone increased penalties signs and supports will be measured as the number of sign installations, including the sign and necessary supports. If a sign and support combination is removed and re-erected at another location as directed by the Engineer, it shall be considered as another unit.

Payment for accepted quantities, complete in place, will be made at the contract unit price. Payment shall be full compensation for all materials, labor, incidentals and equipment for furnishing, erecting, maintaining, covering during suspension of work, and removal of the sign and support.

Item 614, Work Zone Increased Penalties Sign - - - - - - 16 Each

FOR ADDITIONAL MAINTENANCE OF TRAFFIC NOTES SEE SHEET 7

CALCULATED ANS CHECKED SKW

MAINTENANCE OF TRAFFIC

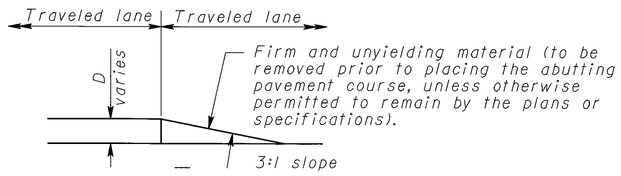
HAS-22-15.25

GENERAL NOTES

1. It is intended that this drawing be used for treatment of drop-offs that develop during construction operations, and that are not otherwise provided for in the construction plans. The suggested treatments are intended for high volume projects that will last at least seven days and have an active work zone 1 mile [1.6 km] or less in length. For guidance on the use of this sheet, see T.E.M., Section 640-6. Where the plans do not provide specific items for labor, equipment, or materials to implement the drop-off treatments specified hereon, they shall be included for payment in the lump sum bid for **Item 614 - Maintaining Traffic.**
2. While the need for certain advisory signing is noted hereon, it is not intended that this be indicative of all signing that may be required to advise or warn motorists, and all requirements of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) must be fulfilled.
3. In urban or otherwise heavily developed areas where pedestrians and/or bicyclists may be present in significant numbers, additional signing and protective measures other than those shown hereon may be required.
4. The drop-off treatment selected for use at any given location shall be as appropriate for the prevailing conditions at the site.
5. Where concrete barrier is specified, it shall be in accordance with **SCD RM-4.2** and Item 622.
6. When drums are specified for a drop-off condition, a minimum number of four drums shall be used. Spacing shall be as indicated in the plans or as specified in the OMUTCD.
7. When W8-9 (Low Shoulder) signs or W8-9a (Shoulder Drop-Off) signs or W8-11 (Uneven Lanes) signs are required, they shall be placed 750' [230 m] in advance of the condition, on all intersecting entrance ramps within the limits of the condition and immediately beyond all inter secting roadways within the limits of the condition. When the drop-off condition extends more than 0.5 mile [800 m], additional signs should be erected at intervals of 1.0 mile [1600 m] or less.
8. For locations, such as at ramps, lane shifts, lane closures, etc., where traffic is required to negotiate a difference in elevation between pavements, a 3:1 slope treatment similar to the Optional Wedge Treatment shall be provided.
9. Portable concrete barrier shall be placed on the same level as the traffic surface and shall not encroach on lane width(s) designated as the minimum required for traffic use. Where drums are used, and their presence would reduce traveled lane widths to less than 10' [3.0 m], drums may be placed on the opposite level from that of traffic provided the dropoff depth does not exceed 5" [125] and approval is granted by the Project Engineer.
10. Pavement Repairs (or similar work):
    a. Lengths greater than 60' [18 m] - utilize appropriate treatment from Condition I.
    b. Lengths of 60' [18 m] or less - repairs shall be effected in accordance with CMS 255.08. Drums may be used as a separator adjacent to the traveled lane.

OPTIONAL WEDGE TREATMENT
(MILLING OR RESURFACING)

1. This treatment may be used when permitted for Condition I only.
2. W8-11 sign required.

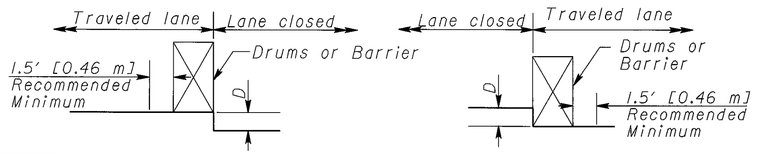


CONDITION I
DROP-OFFS BETWEEN TRAVELED LANES

1. These treatments are to be used for resurfacing, pavement planing, excavation, etc. between or within traveled lanes.

D	Treatment
≤1½" [≤40]	Erect W8-11 sign.
1½"-3" [40-75]	1) Lane closure utilizing drums* as shown below OR 2) Optional Wedge Treatment
>3"-5" [>75-125]	Lane closure utilizing drums as shown below.
>5" [>125]	Lane closure utilizing portable concrete barrier as shown below.

* Cones may be used for daytime only conditions.

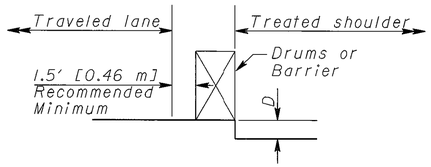


CONDITION II
DROP-OFFS WITHIN GRADED SHOULDER AREA

1. The treatments indicated below are for use in conjunction with resurfacing, planing, or excavations within the graded shoulder area.
2. The graded shoulder area is that flat or gradually sloping area between the edge of a normally traveled lane and the more steeply sloping ditch foreslope or embankment slope. Its surface may be soil or turf, and/or it may be inclusive of a "treated" area (improved with aggregates, asphaltic materials or concrete). For the purpose herein, its maximum width shall be considered to be 12' [3.6 m].

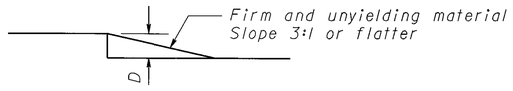
D	Treatment
≤1½" [≤40]	1) Erect W8-9a signs.
>1½"-5" [>40-125]	1) If minimum lane width* requirements can be met, maintain lanes utilizing drums as shown below OR 2) If minimum. lane width* requirements cannot be met, close adjacent lane utilizing drums OR 3) Optional Shoulder Treatment.
>5"-12" [125-305] Daylight only	If minimum lane width* requirements can be met, maintain lanes utilizing drums as shown below.
>5"-24" [>125-610]	1) If minimum lane width* requirements can be met, maintain lanes utilizing portable concrete barrier as shown below. OR 2) If minimum lane width* requirements cannot be met, close adjacent lane utilizing drums.
>24" [>610]	Lane closure utilizing portable concrete barrier as shown below.

* Minimum lane widths shall be 10' [3.0 m] unless otherwise specified in the plans.



OPTIONAL SHOULDER TREATMENT

1. This treatment may not be used within a bitumunos shoulder where a hot longitudnal joint per CMS 401.17 is required.
2. W8-9 signs required.

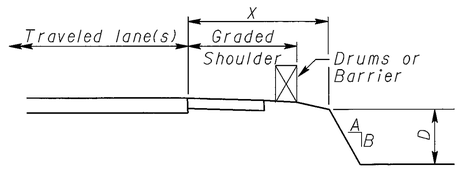


CONDITION III
DROP-OFFS BEYOND GRADED SHOULDER OR BACK OF CURB

1. See Note 2 under Condition II.
2. Use Chart A or B below, as applicable.

CHART A

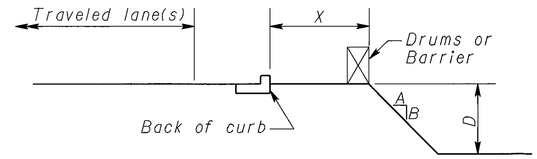
USE FOR: 1. Uncurbed Facilities.
2. Curbed Facilities, where:
   a. Curbs are less than 6" [150] in height.
   b. Curbs are 6" [150] or greater in height and the legal speed is greater than 40 mph [70 km/h].



X	D	A/B	Treatment Required	
			Day	Night
0-4' [0-1.2 m]	Any	Any	(a)	(a)
4'-30' [1.2-9.1 m]	Any	3:1 or Flatter	None	None
4'-12' [1.2-3.6 m]	≤3" [≤75]	Steeper than 3:1	None	None
4'-12' [1.2-3.6 m]	>3"-≤12" [>75-≤305]	Steeper than 3:1	Drums	Drums
4'-12' [1.2-3.6 m]	>12" [>305]	Steeper than 3:1	Drums	Barrier
>12'-20' [>3.6-6.1 m]	<12" [<305]	Steeper than 3:1	None	None
>12'-20' [>3.6-6.1 m]	>12"-≤24" [>305-≤610]	Steeper than 3:1	Drums	Drums
>12'-20' [>3.6-6.1 m]	>24" [>610]	Steeper than 3:1	Drums	Barrier
>20'-30' [>6.1-9.1 m]	<24" [<610]	Steeper than 3:1	None	None
>20'-30' [>6.1-9.1 m]	>24" [>610]	Steeper than 3:1	Drums	Barrier
>30' [>9.1 m]	Any	Any	None	None
(a) Use treatment specified under Condition II.				

CHART B

USE FOR: Curbed facilities, where the curb is 6" [150] or greater in height and the legal speed is 40 mph [70 km/h] or less.



X	D	A/B	Treatment Required	
			Day	Night
0-10' [0-3.0 m]	<12" [<305]	Any	None	Drums
0-10' [0-3.0 m]	>12" [>305]	Any	Drums	Drums
>10' [>3.0 m]	Any	Any	None	None

NOTE: All metric dimensions (in brackets [ ]) are in millimeters unless otherwise noted.

08-07-01

DROPOFFS IN WORK ZONES

HAS-22-15.25

SHEET NUMBER												PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	7		12	13	14	15	17	19	25	26	27	NON-NHS	NHS						
																		ROADWAY	
LUMP												LUMP	LUMP	201	11000	LUMP		CLEARING AND GRUBBING	
								23301				5825	17476	202	38000	23301	FT	GUARDRAIL REMOVED	
688												192	496	202	54000	688	EACH	RAISED PAVEMENT MARKER REMOVED	
					10593	46						3951	6688	203	10000	10639	CU YD	EXCAVATION	
					38136	166						14224	24078	204	10000	38302	SQ YD	SUBGRADE COMPACTION	
				373	364	57	69					274	589	209	60201	863	STATION	LINEAR GRADING, AS PER PLAN	6
								21651.25				5712.5	15938.75	606	13001	21651.25	FT	GUARDRAIL, TYPE 5, AS PER PLAN	7
								412.5				125	287.5	606	13051	412.5	FT	GUARDRAIL, TYPE 5A, AS PER PLAN	7
								487.5					487.5	606	15500	487.5	FT	GUARDRAIL, BARRIER DESIGN, TYPE 5	
								27				6	21	606	22010	27	EACH	ANCHOR ASSEMBLY, TYPE E-98	7
								21				6	15	606	26500	21	EACH	ANCHOR ASSEMBLY, TYPE T	
								8					8	606	31500	8	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE D	30,31
								19					19	606	35000	19	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
								11					11	606	35100	11	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2	
								3					3	606	60010	3	EACH	IMPACT ATTENUATOR, TYPE 1-98 (BIDIRECTIONAL)	7
																		EROSION CONTROL	
												360	640	832	30000	1000	EACH	EROSION CONTROL	
																		DRAINAGE	
	400											144	256	603	00406	400	FT	4" CONDUIT, TYPE F	
										400		144	256	605	31101	400	FT	AGGREGATE DRAINS, AS PER PLAN	26
																		PAVEMENT	
										150		54	96	253	02000	150	CU YD	PAVEMENT REPAIR	
			102206	16576		13558	15071				1151	44879	103683	254	01000	148562	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
									1734				1734	254	01010	1734	SQ YD	PAVEMENT PLANING, PORTLAND CEMENT CONCRETE	
					2785	10						1038	1757	301	46000	2795	CU YD	ASPHALT CONCRETE BASE, PG64-22	
					3938	16						1469	2485	304	20000	3954	CU YD	AGGREGATE BASE	
			7663	1243		1017	1130				86	3363	7776	407	10000	11139	GALLON	TACK COAT	
			4087	663	1283	547	603				46	2273	4956	407	14000	7229	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
					13369	49						4984	8434	408	10000	13418	GALLON	PRIME COAT	
				4973	4848	763	915					3657	7842	408	10001	11499	GALLON	PRIME COAT, AS PER PLAN	6
			4257	691	1337	570	628				48	2367	5164	442	10051	7531	CU YD	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN	6
			4967	806	1559	664	733				56	2761	6024	442	10150	8785	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446)	
				518	505	79	95					381	816	617	10101	1197	CU YD	COMPACTED AGGREGATE, AS PER PLAN	6
				37297	36361							27429	46229	618	40100	73658	FT	RUMBLE STRIPS, (ASPHALT CONCRETE)	

CALCULATED ANS
CHECKED SKW

GENERAL SUMMARY

HAS-22-15.25

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SHEET NUMBER												PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6		8					19				29	NON-NHS	NHS						
																		TRAFFIC CONTROL	
48													48	620	10300	48	EACH	DELINEATOR, TYPE C, POST MOUNTED	
18													18	620	15300	18	EACH	DELINEATOR, TYPE D, POST MOUNTED	
100												20	80	620	31200	100	EACH	DELINEATOR REMOVED FOR DISPOSAL	
											688	192	496	621	00100	688	EACH	RPM	
							328					65	263	626	00100	328	EACH	BARRIER REFLECTOR, TYPE A	
											17.77	5.24	12.53	642	00100	17.77	MILE	EDGE LINE, TYPE I	
											7.54	2.62	4.92	642	00200	7.54	MILE	LANE LINE, TYPE I	
											0.32	0.11	0.21	642	00300	0.32	MILE	CENTER LINE, TYPE I	
											2331	130	2201	642	00400	2331	FT	CHANNELIZING LINE, TYPE I	
											236	47	189	642	00500	236	FT	STOP LINE, TYPE I	
											562	250	312	642	00700	562	FT	TRANSVERSE/DIAGONAL LINE, TYPE I	
											6453		6453	642	00900	6453	SQ FT	ISLAND MARKING, TYPE I	
											2		2	642	01300	2	EACH	LANE ARROW, TYPE I	
																		MAINTENANCE OF TRAFFIC	
		300										108	192	614	11100	300	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR	
		16										6	10	614	12484	16	EACH	WORK ZONE INCREASED PENALTIES SIGN	
											22.62	7.86	14.76	614	20100	22.62	MILE	WORK ZONE LANE LINE, CLASS I, 642 PAINT	
											0.39		0.39	614	21100	0.39	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
											53.31	15.72	37.59	614	22100	53.31	MILE	WORK ZONE EDGE LINE, CLASS I, 642 PAINT	
											6603		6603	614	23200	6603	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT	
											441		441	614	26200	441	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
		LUMP										LUMP	LUMP	614	11001	LUMP		MAINTAINING TRAFFIC, AS PER PLAN	8
												1	2	619	16010	3	MONTH	FIELD OFFICE, TYPE B	
												LUMP	LUMP	623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
												LUMP	LUMP	624	10000	LUMP		MOBILIZATION	

CALCULATED ANS
CHECKED SKW

GENERAL SUMMARY

HAS-22-15.25

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LOCATION	STATION		LENGTH	WIDTH	AREA	ITEM 254	ITEM 407		ITEM 442		ITEM 442						
				℄ Distance From EOP	* CADD Generated	PAVEMENT PLANING, ASPHALT CONCRETE (3" NOMINAL THICKNESS)	TACK COAT (AT 0.075 GAL./S.Y.)	TACK COAT FOR INTERMEDIATE COURSE, (AT 0.04 GAL./S.Y.)	THICKNESS	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446)	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446), AS PER PLAN					
	FROM	TO	FT.	FT.	SQ.YD.	SQ.YD.	GALLON	GALLON	INCH	CU.YD.	INCH	CU.YD.					
MAINLINE - EASTBOUND																	
Trans. from 2 to 4 Lanes			279		* 558	558.00	41.85	22.32	1.75	27.13	1.5	23.25					
	808+11.60	877+28.04	6916.44	24	18443.84	18443.84	1383.29	737.75	1.75	896.58	1.5	768.49					
Decel. Lane - C.R. 29	835+00	836+00	100	6 avg.	66.67	66.67	5.00	2.67	1.75	3.24	1.5	2.78					
Decel. Lane - C.R. 29	836+00	837+52.15	152.15	12	202.87	202.87	15.22	8.11	1.75	9.86	1.5	8.45					
Intersection w/ C.R. 29	837+87	838+65	78	℄ 20	* 240.01	240.01	18.00	9.60	1.75	11.67	1.5	10.00					
SUBTOTAL NON-NHS						**19541.39**	**1463.36**	**780.45**		**948.48**		**812.97**					
	877+28.04	909+39.91	3211.87	24	8564.99	8564.99	642.37	342.60	1.75	416.35	1.5	356.87					
Br. No. HAS-22-1717 R																	
	911+25.79	920+71.70	945.91	24	2522.43	2522.43	189.18	100.90	1.75	122.62	1.5	105.10					
Br. No. HAS-22-1738 R																	
	922+03.26	925+97	393.74	24	1049.97	1049.97	78.75	42.00	1.75	51.04	1.5	43.75					
Br. No. HAS-22-1749 R																	
	927+84.32	928+23.71	39.39	24	105.04	105.04	7.88	4.20	1.75	5.11	1.5	4.38					
Br. No. HAS-22-1753 R																	
	929+68.49	1001+36.40	7167.91	24	19114.43	19114.43	1433.58	764.58	1.75	929.17	1.5	796.43					
Intersection w/ Moore Rd.	973+85	974+50	65	℄ 20	* 111.90	111.90	8.39	4.48	1.75	5.44	1.5	4.66					
Trans. from 4 to 2 Lanes			157		* 366	366.00	27.45	14.64	1.75	17.79	1.5	15.25					
SUBTOTAL NHS						**31834.76**	**2387.60**	**1273.40**		**1547.52**		**1326.44**					
MAINLINE - WESTBOUND																	
	808+11.60	877+28.04	6916.44	24	18443.84	18443.84	1383.29	737.75	1.75	896.58	1.5	768.49					
Quantity for C.R. 29 Median Crossover, see Sheet 28					* 332.24	332.24	24.92	13.29	1.75	16.15	1.5	13.84					
SUBTOTAL NON-NHS						**18776.08**	**1408.21**	**751.04**		**912.73**		**782.33**					
	877+28.04	908+59.21	3131.17	24	8349.79	8349.79	626.23	333.99	1.75	405.89	1.5	347.91					
Br. No. HAS-22-1717 L																	
	910+99.09	920+52.74	953.65	24	2543.07	2543.07	190.73	101.72	1.75	123.62	1.5	105.96					
Br. No. HAS-22-1738 L																	
	921+84.30	926+35	450.70	24	1201.87	1201.87	90.14	48.07	1.75	58.42	1.5	50.08					
Br. No. HAS-22-1749 L																	
	928+31.43	928+50.60	19.17	24	51.12	51.12	3.83	2.04	1.75	2.49	1.5	2.13					
Br. No. HAS-22-1753 L																	
	929+90.29	974+34.66	4444.37	24	11851.65	11851.65	888.87	474.07	1.75	576.12	1.5	493.82					
Intersection w/ Moore Rd.	973+60	974+50	90	℄ 20	*125.25	125.25	9.39	5.01	1.75	6.09	1.5	5.22					
	974+34.66	974+69.52	34.86	45 avg.	174.30	174.30	13.07	6.97	1.75	8.47	1.5	7.26					
	974+69.52	977+27.96	258.44	36	1033.76	1033.76	77.53	41.35	1.75	50.25	1.5	43.07					
	977+27.96	977+77.97	50.01	30 avg.	166.70	166.70	12.50	6.67	1.75	8.10	1.5	6.95					
	977+77.97	1001+36.40	2358.43	24	6289.15	6289.15	471.69	251.57	1.75	305.72	1.5	262.05					
Quantity for Moore Rd. Median Crossover, see Sheet 28					*266.74	266.74	20.01	10.67	1.75	12.97	1.5	11.11					
SUBTOTAL NHS						**32053.40**	**2403.99**	**1282.13**		**1558.14**		**1335.56**					
SUBTOTAL						102205.63	7663.16	4087.02		4966.87		4257.30					
TOTALS CARRIED TO GENERAL SUMMARY						**102206**	**7663**	**4087**		**4967**		**4257**					

CALCULATED ANS CHECKED SKW

ESTIMATED QUANTITIES

HAS-22-15.25

LOCATION	STATION		LENGTH	WIDTH	AREA * CADD Generated	ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE (3" NOMINAL THICKNESS)	ITEM 407 TACK COAT (AT 0.075 GAL./S.Y.)	ITEM 407 TACK COAT FOR INTERMEDIATE COURSE, (AT 0.04 GAL./S.Y.)	ITEM 442 THICKNESS	ITEM 442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446)	ITEM 442 THICKNESS	ITEM 442 ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446), AS PER PLAN	ITEM 618 RUMBLE STRIPS, (ASPHALT CONCRETE)	ITEM 209 LINEAR GRADING, AS PER PLAN	ITEM 408 WIDTH	ITEM 408 PRIME COAT, AS PER PLAN (AT 0.40 GAL./S.Y.)	ITEM 617 COMPACTED AGGREGATE, AS PER PLAN (1 1/2" AVG. THICKNESS)
	FROM	TO	FT.	FT.	SQ.YD.	SQ.YD.	GALLON	GALLON	INCH	CU.YD.	INCH	CU.YD.	FT.	STATION	FT.	GALLON	CU. YD.
MEDIAN SHOULDER E.B.																	
	808+11.60	877+28.04	6916.44	4	3073.97	3073.97	230.55	122.96	1.75	149.43	1.5	128.08	6916.44	69.16	3	922.19	96.06
SUBTOTAL NON-NHS						**3073.97**	**230.55**	**122.96**		**149.43**		**128.08**	**6916.44**	**69.16**		**922.19**	**96.06**
	877+28.04	909+29.84	3201.80	4	1423.02	1423.02	106.73	56.92	1.75	69.17	1.5	59.29	3201.80	32.02	3	426.91	44.47
Br. No. HAS-22-1717 R																	
	911+15.72	920+68.14	952.42	4	423.30	423.30	31.75	16.93	1.75	20.58	1.5	17.64	952.42	9.52	3	126.99	13.23
Br. No. HAS-22-1738 R																	
	921+99.70	926+03.63	403.93	4	179.52	179.52	13.46	7.18	1.75	8.73	1.5	7.48	403.93	4.04	3	53.86	5.61
Br. No. HAS-22-1749 R																	
	927+90.91	928+27.53	36.62	4	16.28	16.28	1.22	0.65	1.75	0.79	1.5	0.68	36.62	0.37	3	4.88	0.51
Br. No. HAS-22-1753 R																	
	929+72.31	1001+36.40	7164.09	4	3184.04	3184.04	238.80	127.36	1.75	154.78	1.5	132.67	7164.09	71.64	3	955.21	99.50
SUBTOTAL NHS						**5226.16**	**391.96**	**209.04**		**254.05**		**217.76**	**11758.86**	**117.59**		**1567.85**	**163.32**
MEDIAN SHOULDER W.B.																	
	808+11.60	877+28.04	6916.44	4	3073.97	3073.97	230.55	122.96	1.75	149.43	1.5	128.08	6916.44	69.16	3	922.19	96.06
SUBTOTAL NON-NHS						**3073.97**	**230.55**	**122.96**		**149.43**		**128.08**	**6916.44**	**69.16**		**922.19**	**96.06**
	877+28.04	908+69.28	3141.24	4	1396.11	1396.11	104.71	55.84	1.75	67.87	1.5	58.17	3141.24	31.41	3	418.83	43.63
Br. No. HAS-22-1717 L																	
	911+09.16	920+56.30	947.14	4	420.95	420.95	31.57	16.84	1.75	20.46	1.5	17.54	947.14	9.47	3	126.29	13.15
Br. No. HAS-22-1738 L																	
	921+87.86	926+28.40	440.54	4	195.80	195.80	14.69	7.83	1.75	9.52	1.5	8.16	440.54	4.41	3	58.74	6.12
Br. No. HAS-22-1749 L																	
	928+15.43	928+41.69	26.26	4	11.67	11.67	0.88	0.47	1.75	0.57	1.5	0.49	26.26	0.26	3	3.5	0.36
Br. No. HAS-22-1753 L																	
	929+86.47	1001+36.40	7149.93	4	3177.75	3177.75	238.33	127.11	1.75	154.47	1.5	132.41	7149.93	71.50	2	953.32	99.30
SUBTOTAL NHS						**5202.28**	**390.18**	**208.09**		**252.89**		**216.77**	**11705.11**	**117.05**		**1560.68**	**162.56**
SUBTOTAL						16576.38	1243.24	663.05		805.80		690.69	37296.85	372.96		4972.91	518.00
TOTALS CARRIED TO GENERAL SUMMARY						**16576**	**1243**	**663**		**806**		**691**	**37297**	**373**		**4973**	**518**

CALCULATED ANS
CHECKED SKW

ESTIMATED QUANTITIES

HAS-22-15.25

LOCATION	STATION		LENGTH	WIDTH	AREA	ITEM 204	ITEM 203	ITEM 301	ITEM 304	ITEM 407	ITEM 408	ITEM 442		ITEM 442		ITEM 618	ITEM 209	ITEM 408		ITEM 617
					* CADD Generated	SUBGRADE COMPACTION	EXCAVATION (ASSUME 10" DEPTH)	3" ASPHALT CONCRETE BASE, PG64-22	4" AGGREGATE BASE	TACK COAT FOR INTERMEDIATE COURSE, (AT 0.04 GAL./S.Y.)	PRIME COAT (AT 0.40 GAL./S.Y.)	THICKNESS	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446)	THICKNESS	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446) AS PER PLAN	RUMBLE STRIPS, (ASPHALT CONCRETE)	LINEAR GRADING, AS PER PLAN	WIDTH	PRIME COAT, AS PER PLAN (AT 0.40 GAL./S.Y.)	COMPACTED AGGREGATE, AS PER PLAN (1 1/2" AVG. THICKNESS)
	FROM	TO	FT.	FT.	SQ.YD.	SQ.YD.	CU.YD.	CU.YD.	CU.YD.	GALLON	GALLON	INCH	CU.YD.	INCH	CU.YD.	FT.	STATION	FT.	GALLON	CU.YD.
OUTSIDE SHOULDER EB																				
	808+11.60	835+00	2688.40	8	2389.69	2837.76	788.27	207.44	293.18	95.59	995.70	1.75	116.17	1.5	99.57	2688.40	26.88	3	358.45	37.34
Decel. Lane - C.R. 29	835+00	836+00	100.00	7 avg.	77.78	94.45	26.24	6.79	9.67	3.11	32.59	1.75	3.78	1.5	3.24	100.00	1.00	3	13.33	1.39
Decel. Lane - C.R. 29	836+00	837+87	187.00	6	124.67	155.84	43.29	10.97	15.78	4.99	52.64	1.75	6.06	1.5	5.19	187.00	1.87	3	24.93	2.60
	838+65	867+00	2835.00	8	2520.00	2992.50	831.25	218.75	309.17	100.80	1050.00	1.75	122.50	1.5	105.00	2835.00	28.35	3	378	39.38
	867+00	868+00	100.00	7 avg.	77.78	94.45	26.24	6.79	9.67	3.11	32.59	1.75	3.78	1.5	3.24	100.00	1.00	3	13.33	1.39
	868+00	870+57.66	257.66	6	171.77	214.71	59.64	15.11	21.74	6.87	72.53	1.75	8.35	1.5	7.16	257.66	2.58	3	34.35	3.58
	871+60.67	877+00	539.33	8	479.40	569.29	158.14	41.61	58.82	19.18	199.75	1.75	23.30	1.5	19.98	539.33	5.39	3	71.91	7.49
	877+00	877+28.04	28.04	6 avg.	18.69	23.36	6.49	1.64	2.37	0.75	7.89	1.75	0.91	1.5	0.78	28.04	0.28	3	3.74	0.39
SUBTOTAL NON-NHS						**6982.36**	**1939.56**	**509.10**	**720.40**	**234.40**	**2443.69**		**284.85**		**244.16**	**6735.43**	**67.35**		**898.04**	**93.56**
	877+84.01	882+00	415.99	6	277.33	346.66	96.29	24.39	35.09	11.09	117.09	1.75	13.48	1.5	11.56	415.99	4.16	3	55.47	5.78
	882+00	884+25	225.00	7 avg.	175.00	212.50	59.03	15.28	21.76	7.00	73.33	1.75	8.51	1.5	7.29	225.00	2.25	3	30.00	3.13
	884+25	909+49.98	2524.98	8	2244.43	2665.26	740.35	194.83	275.36	89.78	935.18	1.75	109.10	1.5	93.52	2524.98	25.25	3	336.66	35.07
Br. No. HAS-22-1717 R																				
	911+35.86	920+75.25	939.39	8	835.01	991.58	275.44	72.48	102.44	33.40	347.92	1.75	40.59	1.5	34.79	939.39	9.39	3	125.25	13.05
Br. No. HAS-22-1738 R																				
	922+06.81	925+81.55	374.74	8	333.10	395.56	109.88	28.92	40.87	13.32	138.79	1.75	16.19	1.5	13.88	374.74	3.75	3	49.97	5.20
Br. No. HAS-22-1749 R																				
	927+68.83	928+14.80	45.97	8	40.86	48.52	13.48	3.55	5.01	1.63	17.03	1.75	1.99	1.5	1.70	45.97	0.46	3	6.13	0.64
Br. No. HAS-22-1753 R																				
	929+59.58	929+65.00	5.42	8	4.82	5.72	1.59	0.42	0.59	0.19	2.01	1.75	0.23	1.5	0.20	5.42	0.05	3	0.72	0.08
	931+49.67	936+31.52	481.85	8	428.31	508.62	141.28	37.18	52.55	17.13	178.46	1.75	20.82	1.5	17.85	481.85	4.82	3	64.25	6.69
	936+88.24	973+85	3696.76	8	3286.01	3902.14	1083.93	285.24	403.14	131.44	1369.17	1.75	159.74	1.5	136.92	3696.76	36.97	3	492.90	51.34
	974+50	1001+36.40	2686.40	8	2387.91	2835.64	787.68	207.28	292.96	95.52	994.96	1.75	116.08	1.5	99.50	2686.40	26.86	3	358.19	37.31
SUBTOTAL NHS						**11912.20**	**3308.95**	**869.57**	**1229.77**	**400.50**	**4173.94**		**486.73**		**417.21**	**11396.50**	**113.96**		**1519.54**	**158.29**
OUTSIDE SHOULDER WB																				
	808+11.60	873+64.97	6553.37	8	5825.22	6917.45	1921.51	505.66	714.67	233.01	2427.17	1.75	283.17	1.5	242.72	6553.37	65.53	3	873.78	91.02
	874+20.94	877+28.04	307.10	8	272.98	324.16	90.04	23.70	33.49	10.92	113.74	1.75	13.27	1.5	11.37	307.10	3.07	3	40.95	4.27
SUBTOTAL NON-NHS						**7241.61**	**2011.55**	**529.36**	**748.16**	**243.93**	**2540.91**		**296.44**		**254.09**	**6860.47**	**68.60**		**914.73**	**95.29**
	877+28.04	888+70.23	1142.19	8	1015.28	1205.65	334.90	88.13	124.56	40.61	423.03	1.75	49.35	1.5	42.30	1142.19	11.42	3	152.29	15.86
	889+33.42	908+49.14	1915.72	8	1702.86	2022.15	561.71	147.82	208.92	68.11	709.53	1.75	82.78	1.5	70.95	1915.72	19.16	3	255.43	26.61
Br. No. HAS-22-1717 L																				
	910+89.02	918+30.63	741.61	8	659.21	782.81	217.45	57.22	80.88	26.37	274.67	1.75	32.04	1.5	27.47	741.61	7.42	3	98.88	10.30
	918+96	920+49.19	153.19	8	136.17	161.70	44.92	11.82	16.71	5.45	56.74	1.75	6.62	1.5	5.67	153.19	1.53	3	20.43	2.13
Br. No. HAS-22-1738 L																				
	921+80.75	925+33	352.25	8	313.11	371.82	103.28	27.18	38.41	12.52	130.46	1.75	15.22	1.5	13.05	352.25	3.52	3	46.97	4.89
Br. No. HAS-22-1749 L																				
	928+38.28	928+54.42	16.14	8	14.35	17.04	4.73	1.25	1.76	0.57	5.98	1.75	0.70	1.5	0.60	16.14	0.16	3	2.15	0.22
Br. No. HAS-22-1753 L																				
	929+99.20	973+60	4360.80	8	3876.27	4603.07	1278.63	336.48	475.56	155.05	1615.11	1.75	188.43	1.5	161.51	4360.80	43.61	3	581.44	60.57
	974+50	1001+36.40	2686.40	8	2387.91	2835.64	787.68	207.28	292.96	95.52	994.96	1.75	116.08	1.5	99.50	2686.40	26.86	32	358.19	37.31
SUBTOTAL NHS						**11999.88**	**3333.30**	**877.18**	**1239.76**	**404.20**	**4210.48**		**491.22**		**421.05**	**11368.30**	**113.68**		**1515.78**	**157.89**
SUBTOTAL						**38136.05**	**10593.36**	**2785.21**	**3938.09**	**1283.03**	**13369.02**		**1559.24**		**1336.51**	**36360.70**	**363.59**		**4848.09**	**505.03**
TOTALS CARRIED TO GENERAL SUMMARY						**38136**	**10593**	**2785**	**3938**	**1283**	**13369**		**1559**		**1337**	**36361**	**364**		**4848**	**505**

CALCULATED ANS
CHECKED SKW

ESTIMATED QUANTITIES

HAS-22-15.25

ESTIMATED QUANTITIES

CALCULATED ANS CHECKED SKW

LOCATION	STATION (* ℄ U.S. 22 Station) FROM	STATION TO	LENGTH FT.	WIDTH (℄ Distance From EOP) FT.	AREA (* CADD Generated) SQ.YD.	ITEM 204 SUBGRADE COMPACTION SQ.YD.	ITEM 203 EXCAVATION (ASSUME 10" DEPTH) SQ.YD.	ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE (3" NOMINAL THICKNESS) SQ.YD.	ITEM 301 3" ASPHALT CONCRETE BASE, PG64-22 CU.YD.	ITEM 304 4" AGGREGATE BASE CU.YD.	ITEM 407 TACK COAT (AT 0.075 GAL./S.Y.) GALLON	ITEM 407 TACK COAT FOR INTERMEDIATE COURSE, (AT 0.04 GAL./S.Y.) GALLON	ITEM 408 PRIME COAT (AT 0.40 GAL./S.Y.) GALLON	ITEM 442 THICKNESS INCH	ITEM 442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446) CU.YD.	ITEM 442 THICKNESS INCH	ITEM 442 ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446) AS PER PLAN CU.YD.	ITEM 209 LINEAR GRADING, AS PER PLAN (* Quantity for Both Lt. & Rt.) STATION	ITEM 408 WIDTH FT.	ITEM 408 PRIME COAT, AS PER PLAN (AT 0.40 GAL./S.Y.) GALLON	ITEM 617 COMPACTED AGGREGATE, AS PER PLAN (1 1/2" AVG. THICKNESS) CU.YD.
U.S. 22 & U.S. 250 INT.																					
Ramp 'A'	1+54.70	8+64.83	710.13	16	1262.45			1262.45			94.68	50.50		1.75	61.37	1.50	52.60				
Ramp 'A'	8+64.83	10+17.31	152.48	14 avg.	237.19			237.19			17.79	9.49		1.75	11.53	1.50	9.88				
Ramp 'A'	10+17.31	11+07.05	89.74	12	119.65			119.65			8.97	4.79		1.75	5.82	1.50	4.99				
Ramp 'A'	11+07.05	* 894+75	100	6 avg.	66.67			66.67			5.00	2.67		1.75	3.24	1.50	2.78				
Ramp 'A' Gore Area	5+59.49	8+64.83	305.34		* 239			239			17.93	9.56		1.75	11.62	1.50	9.96				
Ramp 'A' Lt. Shoulder	1+54.70	5+59.49	404.79	6	269.86			269.86			20.24	10.79		1.75	13.12	1.50	11.24	4.05	3	53.97	5.62
Ramp 'A' Lt. Shoulder	5+59.49	6+59.58	100.09	7 avg.	77.85			77.85			5.84	3.11		1.75	3.78	1.50	3.24	1.00	3	13.35	1.39
Ramp 'A' Rt. Shoulder	1+54.70	5+59.49	404.79	3	134.93			134.93			10.12	5.40		1.75	6.56	1.50	5.62	4.05	3	53.97	5.62
Ramp 'B'	* 868+50	0+00	225.00	6 avg.	150.00			150.00			11.25	6.00		1.75	7.29	1.50	6.25				
Ramp 'B'	0+00	2+89.97	289.97	12	386.63			386.63			29.00	15.47		1.75	18.79	1.50	16.11				
Ramp 'B'	2+89.97	3+43.07	53.10	13.25avg	78.18			78.18			5.86	3.13		1.75	3.80	1.50	3.26				
Ramp 'B'	3+43.07	4+43.07	100.00	16 avg.	177.78			177.78			13.33	7.11		1.75	8.64	1.50	7.41				
Ramp 'B'	4+43.07	4+53.07	10.00	16.25avg	18.06			18.06			1.35	0.72		1.75	0.88	1.50	0.75				
Ramp 'B'	4+53.07	7+75	321.93	16	572.32			572.32			42.92	22.89		1.75	27.82	1.50	23.85				
Ramp 'B'	7+75	8+00	25.00	25 avg.	69.44			69.44			5.21	2.78		1.75	3.38	1.50	2.89				
Ramp 'B'	8+00	11+71.61	371.61	34	1403.86			1403.86			105.29	56.15		1.75	68.24	1.50	58.49				
Ramp 'B' and U.S. 250	11+71.61	12+54.21	82.60		* 525			525			39.38	21.00		1.75	25.52	1.50	21.88	# 1.65	3	#22.02	#2.30
Ramp 'B' Gore Area	3+22.83	3+42.72	19.89		* 4			4			0.30	0.16		1.75	0.19	1.50	0.17				
Ramp 'B' Lt. Shoulder	2+89.98	3+43.07	53.09	8	47.19			47.19			3.54	1.89		1.75	2.29	1.50	1.97	0.53	3	7.08	0.74
Ramp 'B' Lt. Shoulder	3+43.07	3+83.07	40.00	7 avg.	31.11			31.11			2.33	1.24		1.75	1.51	1.50	1.3	0.40	3	5.33	0.56
Ramp 'B' Lt. Shoulder	3+83.07	7+35	351.93	6	234.62			234.62			17.60	9.38		1.75	11.41	1.50	9.78	3.52	3	46.92	4.89
Intersection with C.R. 2	7+35	8+25	90.00	℄ 20	* 133			133			9.98	5.32		1.75	6.47	1.50	5.54	0.90	3	12.00	1.25
Ramp 'B' Lt. Shoulder	8+25	11+71.61	346.61	6	231.07			231.07			17.33	9.24		1.75	11.23	1.50	9.63	3.47	3	46.21	4.81
Ramp 'B' Rt. Shoulder	3+42.72	8+00	457.28	3	152.43			152.43			11.43	6.10		1.75	7.41	1.50	6.35	4.57	3	60.97	6.35
Ramp 'B' Rt. Shoulder	8+00	11+71.61	371.61	6	247.74			247.74			18.58	9.91		1.75	12.04	1.50	10.32	3.72	3	49.55	5.16
Ramp 'C'	* 867+00	0+00	100.00	6 avg.	66.67			66.67			5.00	2.67		1.75	3.24	1.50	2.78				
Ramp 'C'	0+00	2+57.66	257.66	12	343.55			343.55			25.77	13.74		1.75	16.70	1.50	14.31				
Ramp 'C'	2+57.66	3+54.30	96.64	16.25avg	174.49			174.49			13.09	6.98		1.75	8.48	1.50	7.27				
Ramp 'C'	3+54.30	4+29.66	75.36	19 avg.	159.09			159.09			11.93	6.38		1.75	7.73	1.50	6.63				
Ramp 'C'	4+29.66	4+39.66	10.00	16.75avg	18.61			18.61			1.40	0.74		1.75	0.90	1.50	0.78				
Ramp 'C'	4+39.66	9+60.88	521.22	16	926.61			926.61			69.50	37.06		1.75	45.04	1.50	38.61				
Ramp 'C' Gore Area	3+17.63	3+54.49	36.86		*100			100			7.50	4.00		1.75	4.86	1.50	4.17				
Ramp 'C' Rt. Shoulder	2+57.66	4+54.30	196.64	7 avg.	152.94			152.94			11.47	6.12		1.75	7.43	1.50	6.37	1.97	3	26.22	2.73
Ramp 'C' Rt. Shoulder	4+54.30	9+60.88	506.58	6	337.72			337.72			25.33	13.51		1.75	16.42	1.50	14.07	5.07	3	67.54	7.04
Ramp 'C' Lt. Shoulder	3+54.49	8+56.40	501.91	3	167.30			167.30			12.55	6.69		1.75	8.13	1.50	6.97	5.02	3	66.92	6.97
Ramp 'D'	0+00	2+21.73	221.73	33.5 avg	825.33			825.33			61.90	33.01		1.75	40.12	1.50	34.39				
Ramp 'D'	2+21.73	4+24	202.27	34	764.13			764.13			57.31	30.57		1.75	37.15	1.50	31.84				
Ramp 'D'	4+24	8+18.89	394.89	17	745.90			745.90			55.94	29.84		1.75	36.26	1.50	31.08				
Ramp 'D'	8+18.89	9+18.89	100.00	16 avg.	177.78			177.78			13.33	7.11		1.75	8.64	1.50	7.41				
Ramp 'D'	9+18.89	9+72	53.11	13.25avg	78.19			78.19			5.86	3.13		1.75	3.80	1.50	3.26				
Ramp 'D'	9+72	13+87.99	415.99	12	554.65			554.65			41.60	22.19		1.75	26.96	1.50	23.11				
Ramp 'D'	13+87.99	* 884+25	225.00	6 avg.	150.00			150.00			11.25	6.00		1.75	7.29	1.50	6.25				
Ramp 'D' Gore Area	9+18.89	9+39.01	20.12		* 4			4			0.30	0.16		1.75	0.19	1.50	0.17				
Ramp 'D' Rt. Shoulder	0+00	8+78.89	878.89	6	585.93			585.93			43.94	23.44		1.75	28.48	1.50	24.41	8.79	3	117.19	12.21
Ramp 'D' Rt. Shoulder	8+78.89	9+72	93.11	7 avg.	72.42			72.42			5.43	2.90		1.75	3.52	1.50	3.02	0.93	3	12.41	1.29
Ramp 'D' Lt. Shoulder	0+00	2+21.73	221.73	6	147.82			147.82			11.09	5.91		1.75	7.19	1.50	6.16	2.22	3	29.56	3.08
Ramp 'D' Lt. Shoulder	2+21.73	4+24	202.27	6	134.85			134.85			10.11	5.39		1.75	6.56	1.50	5.62	2.02	3	26.97	2.81
Ramp 'D' Lt. Shoulder	4+86.20	8+18.89	332.69	3	110.90	166.35	46.21		10.27	15.74		4.44	49.29	1.75	5.39	1.50	4.62	3.33	3	44.36	4.62
SUBTOTAL & NHS SUBTOTAL						***166.35***	***46.21***	***13558.01***	***10.27***	***15.74***	***1016.85***	***546.78***	***49.29***		***664.43***		***569.56***	***57.20***		***762.54***	***79.44***
TOTALS CARRIED TO GENERAL SUMMARY						***166***	***46***	***13558***	***10***	***16***	***1017***	***547***	***49***		***664***		***570***	***57***		***763***	***79***

HAS-22-15.25

LOCATION	STATION * ℄ U.S. 22 Station FROM	STATION TO	LENGTH	WIDTH	AREA * CADD Generated			ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE (3" NOMINAL THICKNESS)		ITEM 407 TACK COAT (AT 0.075 GAL./S.Y.)	ITEM 407 TACK COAT FOR INTERMEDIATE COURSE, (AT 0.04 GAL./S.Y.)		ITEM 442 THICKNESS	ITEM 442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446)	ITEM 442 THICKNESS	ITEM 442 ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446) AS PER PLAN	ITEM 209 LINEAR GRADING, AS PER PLAN * Quantity for Both Lt. & Rt.	ITEM 408 WIDTH	ITEM 408 PRIME COAT, AS PER PLAN (AT 0.40 GAL./S.Y.)	ITEM 617 COMPACTED AGGREGATE, AS PER PLAN (1 1/2" AVG. THICKNESS)
			FT.	FT.	SQ.YD.			SQ.YD.		GALLON	GALLON		INCH	CU.YD.	INCH	CU.YD.	STATION	FT.	GALLON	CU.YD.
U.S. 22 & S.R. 9 INT.																				
Ramp 'E' and S.R. 9	*0+11.03*	*0+56.10*	*45.07*		** 368*			*368*		*27.60*	*14.72*		*1.75*	*17.89*	*1.50*	*15.33*	** 0.90*	*3*	** 12.02*	** 1.26*
Ramp 'E'	*0+56.10*	*6+82.09*	*625.99*	*34*	*2364.85*			*2364.85*		*177.36*	*94.59*		*1.75*	*114.96*	*1.50*	*98.54*				
Ramp 'E'	*6+82.09*	*10+98.69*	*416.60*	*17*	*786.91*			*786.91*		*59.02*	*31.48*		*1.75*	*38.25*	*1.50*	*32.79*				
Ramp 'E'	*10+98.69*	*11+98.69*	*100.00*	*19 avg.*	*211.11*			*211.11*		*15.83*	*8.44*		*1.75*	*10.26*	*1.50*	*8.80*				
Ramp 'E'	*11+98.69*	*13+09.01*	*110.32*	*16 avg.*	*196.12*			*196.12*		*14.71*	*7.84*		*1.75*	*9.53*	*1.50*	*8.17*				
HAS-22-1749 L																				
Ramp 'E'	*14+98.29*	*15+14.43*	*16.14*	*12*	*21.52*			*21.52*		*1.61*	*0.86*		*1.75*	*1.05*	*1.50*	*0.90*				
HAS-22-1753 L																				
Ramp 'E'	*16+16.01*	** 931+00*	*100.00*	*6 avg.*	*66.67*			*66.67*		*5.00*	*2.67*		*1.75*	*3.24*	*1.50*	*2.78*				
Ramp 'E' Gore Area	*11+98.52*	*12+40.52*	*42.00*		** 103*			*103*		*7.73*	*4.12*		*1.75*	*5.01*	*1.50*	*4.29*				
Ramp 'E' Lt. Shoulder	*0+56.10*	*10+98.69*	*1042.59*	*6*	*695.06*			*695.06*		*52.13*	*27.80*		*1.75*	*33.79*	*1.50*	*28.96*	*10.43*	*3*	*139.01*	*14.48*
Ramp 'E' Lt. Shoulder	*10+98.69*	*11+98.52*	*99.83*	*7 avg.*	*77.65*			*77.65*		*5.82*	*3.11*		*1.75*	*3.77*	*1.50*	*3.24*	*1.00*	*3*	*13.31*	*1.39*
Ramp 'E' Lt. Shoulder	*11+98.52*	*13+09.01*	*110.49*	*8*	*98.21*			*98.21*		*7.37*	*3.93*		*1.75*	*4.77*	*1.50*	*4.09*	*1.10*	*3*	*14.73*	*1.53*
Ramp 'E' Rt. Shoulder	*0+56.10*	*6+82.09*	*625.99*	*6*	*417.33*			*417.33*		*31.30*	*16.69*		*1.75*	*20.29*	*1.50*	*17.39*	*6.26*	*3*	*83.47*	*8.69*
Ramp 'E' Rt. Shoulder	*7+33.40*	*11+98.52*	*465.12*	*3*	*155.04*			*155.04*		*11.63*	*6.20*		*1.75*	*7.54*	*1.50*	*6.46*	*4.65*	*3*	*62.02*	*6.46*
Ramp 'F'	** 914+25*	*0+00*	*225.00*	*6 avg.*	*150.00*			*150.00*		*11.25*	*6.00*		*1.75*	*7.29*	*1.50*	*6.25*				
Ramp 'F'	*0+00*	*1+80.63*	*180.63*	*12*	*240.84*			*240.84*		*18.06*	*9.63*		*1.75*	*11.71*	*1.50*	*10.04*				
Ramp 'F'	*1+80.63*	*2+43.72*	*63.09*	*13.25avg*	*92.88*			*92.88*		*6.97*	*3.72*		*1.75*	*4.52*	*1.50*	*3.87*				
Ramp 'F'	*2+43.72*	*3+50.76*	*107.04*	*16.9avg.*	*201.00*			*201.00*		*15.08*	*8.04*		*1.75*	*9.77*	*1.50*	*8.38*				
Ramp 'F'	*3+50.76*	*3+75.76*	*25.00*	*19.33*	*53.69*			*53.69*		*4.03*	*2.15*		*1.75*	*2.61*	*1.50*	*2.24*				
HAS-22-1738 F																				
Ramp 'F'	*5+07.58*	*8+20.28*	*312.70*	*16*	*555.91*			*555.91*		*41.69*	*22.24*		*1.75*	*27.02*	*1.50*	*23.16*				
Ramp 'F'	*8+20.28*	*8+30.28*	*10.00*	*16.5 avg*	*18.33*			*18.33*		*1.37*	*0.73*		*1.75*	*0.89*	*1.50*	*0.76*				
Ramp 'F'	*8+30.28*	*9+30.28*	*100.00*	*17*	*188.89*			*188.89*		*14.17*	*7.56*		*1.75*	*9.18*	*1.50*	*7.87*				
Ramp 'F' Gore Area	*2+19.67*	*2+43.72*	*24.05*		** 5*			*5*		*0.38*	*0.20*		*1.75*	*0.24*	*1.50*	*0.21*				
Ramp 'F' Lt. Shoulder	*1+80.63*	*2+43.72*	*63.09*	*8*	*56.08*			*56.08*		*4.21*	*2.24*		*1.75*	*2.73*	*1.50*	*2.34*	*0.63*	*3*	*8.41*	*0.88*
Ramp 'F' Lt. Shoulder	*2+43.72*	*2+83.72*	*40.00*	*7 avg.*	*31.11*			*31.11*		*2.33*	*1.24*		*1.75*	*1.51*	*1.50*	*1.30*	*0.40*	*3*	*5.33*	*0.56*
Ramp 'F' Lt. Shoulder	*2+83.72*	*3+75.76*	*92.04*	*6*	*61.36*			*61.36*		*4.60*	*2.45*		*1.75*	*2.98*	*1.50*	*2.56*	*0.92*	*3*	*12.27*	*1.28*
HAS-22-1738 F																				
Ramp 'F' Lt. Shoulder	*5+07.58*	*9+30.28*	*422.70*	*6*	*281.80*			*281.80*		*21.14*	*11.27*		*1.75*	*13.70*	*1.50*	*11.74*	*4.23*	*3*	*56.36*	*5.87*
Ramp 'F' Rt. Shoulder	*2+43.72*	*3+75.76*	*132.04*	*3*	*44.01*			*44.01*		*3.30*	*1.76*		*1.75*	*2.14*	*1.50*	*1.83*	*1.32*	*3*	*17.61*	*1.83*
HAS-22-1738 F																				
Ramp 'F' Rt. Shoulder	*5+07.58*	*8+58.01*	*350.43*	*3*	*116.81*			*116.81*		*8.76*	*4.67*		*1.75*	*5.68*	*1.50*	*4.87*	*3.50*	*3*	*46.72*	*4.87*
Ramp 'G'	** 924+75*	*0+00*	*100.00*	*6 avg.*	*66.67*			*66.67*		*5.00*	*2.67*		*1.75*	*3.24*	*1.50*	*2.78*				
HAS-22-1749 R																				
Ramp 'G'	*1+93.83*	*2+39.80*	*45.97*	*12*	*61.29*			*61.29*		*4.60*	*2.45*		*1.75*	*2.98*	*1.50*	*2.55*				
HAS-22-1753 R																				
Ramp 'G'	*3+84.58*	*5+20.94*	*136.36*	*16.25avg*	*246.21*			*246.21*		*18.47*	*9.85*		*1.75*	*11.97*	*1.50*	*10.26*				
Ramp 'G'	*5+20.94*	*5+69.28*	*48.34*	*20.5*	*110.11*			*110.11*		*8.26*	*4.40*		*1.75*	*5.35*	*1.50*	*4.59*				
Ramp 'G'	*5+69.28*	*6+69.09*	*99.81*	*19 avg.*	*210.71*			*210.71*		*15.80*	*8.43*		*1.75*	*10.24*	*1.50*	*8.78*				
Ramp 'G'	*6+69.09*	*9+95*	*325.91*	*17*	*615.61*			*615.61*		*46.17*	*24.62*		*1.75*	*29.93*	*1.50*	*25.65*				
Ramp 'G'	*9+95*	*14+72.72*	*477.72*	*34*	*1804.72*			*1804.72*		*135.35*	*72.19*		*1.75*	*87.73*	*1.50*	*75.20*				
HAS-250-19.12																				
Ramp 'G'	*15+97.28*	*16+79.20*	*81.92*	*34*	*309.48*			*309.48*		*23.21*	*12.38*		*1.75*	*15.04*	*1.50*	*12.90*				
Ramp 'G' and S.R. 9	*16+79.20*	*17+88.83*	*109.63*		** 730*			*730*		*54.75*	*29.20*		*1.75*	*35.49*	*1.50*	*30.42*	** 2.19*	*3*	** 29.24*	** 3.04*
Ramp 'G' Gore Area	*5+20.94*	*5+69.28*	*48.34*		** 76*			*76*		*5.70*	*3.04*		*1.75*	*3.69*	*1.50*	*3.17*				
Ramp 'G' Rt. Shoulder	*3+90*	*5+69.28*	*179.28*	*8*	*159.36*			*159.36*		*11.95*	*6.37*		*1.75*	*7.75*	*1.50*	*6.64*	*1.79*	*3*	*23.90*	*2.49*
Ramp 'G' Rt. Shoulder	*5+69.28*	*6+69.09*	*99.81*	*7 avg.*	*77.63*			*77.63*		*5.82*	*3.11*		*1.75*	*3.77*	*1.50*	*3.23*	*1.00*	*3*	*13.31*	*1.39*
SUBTOTAL CARRIED TO SHEET 17								***12126.97***		***909.53***	***485.06***			***589.50***		***505.33***	***40.32***		***537.71***	***56.02***

CALCULATED ANS CHECKED SKW

ESTIMATED QUANTITIES

HAS-22-15.25

LOCATION	STATION * ℄ U.S. 22 Station FROM	STATION TO	LENGTH FT.	WIDTH FT.	AREA * CADD Generated SQ.YD.			ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE (3" NOMINAL THICKNESS) SQ.YD.		ITEM 407 TACK COAT (AT 0.075 GAL./S.Y.) GALLON	ITEM 407 TACK COAT FOR INTERMEDIATE COURSE, (AT 0.04 GAL./S.Y.) GALLON		ITEM 442 THICKNESS INCH	ITEM 442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446) CU.YD.	ITEM 442 THICKNESS INCH	ITEM 442 ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446) AS PER PLAN CU.YD.	ITEM 209 LINEAR GRADING, AS PER PLAN * Quantity for Both Lt. & Rt. STATION	ITEM 408 WIDTH FT.	ITEM 408 PRIME COAT, AS PER PLAN (AT 0.40 GAL./S.Y.) GALLON	ITEM 617 COMPACTED AGGREGATE, AS PER PLAN (1 1/2" AVG. THICKNESS) CU.YD.
U.S. 22 & S.R. 9 INT. (Cont.)																				
Ramp 'G' Rt. Shoulder	*6+69.09*	*14+72.72*	*803.63*	*6*	*535.75*			*535.75*		*40.18*	*21.43*		*1.75*	*26.04*	*1.50*	*22.32*	*8.04*	*3*	*107.15*	*11.16*
HAS-250-19.12																				
Ramp 'G' Rt. Shoulder	*15+97.28*	*16+79.20*	*81.92*	*6*	*54.61*			*54.61*		*4.10*	*2.18*		*1.75*	*2.65*	*1.50*	*2.28*	*0.82*	*3*	*10.92*	*1.14*
Ramp 'G' Lt. Shoulder	*5+69.28*	*9+21.11*	*351.83*	*3*	*117.28*			*117.28*		*8.80*	*4.69*		*1.75*	*5.70*	*1.50*	*4.89*	*3.52*	*3*	*46.91*	*4.89*
Ramp 'G' Lt. Shoulder	*9+95*	*14+66.88*	*471.88*	*6*	*314.59*			*314.59*		*23.59*	*12.58*		*1.75*	*15.29*	*1.50*	*13.11*	*4.72*	*3*	*62.92*	*6.55*
HAS-250-19.12																				
Ramp 'G' Lt. Shoulder	*15+91.44*	*16+79.20*	*87.76*	*6*	*58.51*			*58.51*		*4.39*	*2.34*		*1.75*	*2.84*	*1.50*	*2.44*	*0.88*	*3*	*11.70*	*1.22*
Ramp 'H'	*0+00*	*0+78*	*78.00*	*17*	*147.33*			*147.33*		*11.05*	*5.89*		*1.75*	*7.16*	*1.50*	*6.14*				
Ramp 'H'	*0+78*	*3+48.49*	*270.49*	*16*	*480.87*			*480.87*		*36.07*	*19.23*		*1.75*	*23.38*	*1.50*	*20.04*				
Ramp 'H'	*3+48.49*	*3+58.49*	*10.00*	*16.5 avg*	*18.33*			*18.33*		*1.37*	*0.73*		*1.75*	*0.89*	*1.50*	*0.76*				
Ramp 'H'	*3+58.49*	*5+51.24*	*192.75*	*16 avg.*	*342.67*			*342.67*		*25.70*	*13.71*		*1.75*	*16.66*	*1.50*	*14.28*				
Ramp 'H'	*5+51.24*	*5+83.67*	*32.43*	*13.25avg*	*47.74*			*47.74*		*3.58*	*1.91*		*1.75*	*2.32*	*1.50*	*1.99*				
Ramp 'H'	*5+83.67*	*6+70.01*	*86.34*	*12*	*115.12*			*115.12*		*8.63*	*4.60*		*1.75*	*5.60*	*1.50*	*4.80*				
Ramp 'H'	*6+70.01*	** 940+00*	*225.00*	*6 avg.*	*150.00*			*150.00*		*11.25*	*6.00*		*1.75*	*7.29*	*1.50*	*6.25*				
Ramp 'H' Gore Area	*5+30.05*	*5+51.24*	*21.19*		** 5*			*5*		*0.38*	*0.20*		*1.75*	*0.24*	*1.50*	*0.21*				
Ramp 'H' Lt. Shoulder	*0+78*	*5+30.05*	*452.05*	*3*	*150.68*			*150.68*		*11.30*	*6.03*		*1.75*	*7.32*	*1.50*	*6.28*	*4.52*	*3*	*60.27*	*6.28*
Ramp 'H' Rt. Shoulder	*0+00*	*4+90.05*	*490.05*	*6*	*326.70*			*326.70*		*24.50*	*13.07*		*1.75*	*15.88*	*1.50*	*13.61*	*4.90*	*3*	*65.34*	*6.81*
Ramp 'H' Rt. Shoulder	*4+90.05*	*5+30.05*	*40.00*	*7 avg.*	*31.11*			*31.11*		*2.33*	*1.24*		*1.75*	*1.51*	*1.50*	*1.30*	*0.40*	*3*	*5.33*	*0.56*
Ramp 'H' Rt. Shoulder	*5+30.05*	*5+83.67*	*53.62*	*8*	*47.66*			*47.66*		*3.57*	*1.91*		*1.75*	*2.32*	*1.50*	*1.99*	*0.54*	*3*	*7.15*	*0.74*
SUBTOTAL THIS SHEET								*2943.95*		*220.79*	*117.74*			*143.09*		*122.69*	*28.34*		*377.69*	*39.35*
SUBTOTAL CARRIED FROM SHEET 16.								*12126.97*		*909.53*	*485.06*			*589.50*		*505.33*	*40.32*		*537.71*	*56.02*
SUBTOTAL & NHS SUBTOTAL								***15070.92***		***1130.32***	***602.80***			***732.59***		***628.02***	***68.66***		***915.40***	***95.37***
TOTALS CARRIED TO GENERAL SUMMARY								*15071*		*1130*	*603*			*733*		*628*	*69*		*915*	*95*

CALCULATED ANS
CHECKED SKW

ESTIMATED QUANTITIES

HAS-22-15.25

SLM FROM	SLM TO	SIDE (M = Median)	202 GUARDRAIL REMOVED	606 GUARDRAIL, TYPE 5, AS PER PLAN	606 GUARDRAIL, TYPE 5A, AS PER PLAN	606 GUARDRAIL, BARRIER DESIGN, TYPE 5	606 ANCHOR ASSEMBLY, TYPE E-98	606 ANCHOR ASSEMBLY, TYPE T	606 BRIDGE TERMINAL ASSEMBLY, TYPE D	606 BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 BRIDGE TERMINAL ASSEMBLY, TYPE 2	606 IMPACT ATTENUATOR, TYPE 1-98 (BIDIRECTIONAL)	626 BARRIER REFLECTOR TYPE A	COMMENTS
			FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	See Anchor Assembly Note on Sheet 24.
℄ 15.53	15.71	Lt.	962.5											
15.53	15.84	Lt.		1700			1	1					18	℄ Connect two Guardrail Runs, additional 237.5'
15.58	15.81	Rt.	1262.5	1225			1	1					13	
℄ 15.75	15.84	Lt.	537.5											
16.17	16.38	Lt.	1150	1112.5			1	1					12	
16.18	16.45	Rt.	1475	1375	62.5		1	1					16	
16.42	16.45	MRt.	175	75	62.5		1	1					3	
16.53	16.57	Rt.	262.5	225			1	1					3	
SUBTOTAL NON-NHS			5825	5712.5	125		6	6					65	
16.63	16.69	M	325		150	175		2				2	4	See Detail on Sheet 23
16.66	16.67	Lt.	112.5	87.5			1			1			2	
16.97	17.14	Lt.	925	912.5				1			1		10	
17.06	17.16	Rt.	562.5	537.5			1			1			6	
17.12	17.18	MRt.	337.50	312.5			1			1			4	
17.20	17.30	M	600	287.5	137.5	87.5		1		1	1	1	6	See Detail on Sheet 23
17.20	17.23	Lt.	200	200						1	1		3	
17.21	17.23	Rt.	137.5	137.5						1	1		2	
17.24	17.25	Lt.	112.5	75			1			1			2	
17.33	17.39	MRt.	337.5	262.5			1		1				4	See Plan Insert Sheet for Type D Design. Do not extend guardrail run at this location due to Type E-98 Anchor Assembly.
17.35	17.38	Rt.	212.5	187.5			1		1				3	See Plan Insert Sheet for Type D Design
17.40	17.52	M	412.5	187.5		225			1	1			5	See Plan Insert Sheet for Type D Design
17.40	17.42	Lt.	162.5	137.5			1		1				2	
17.41	17.47	Rt.	362.5	362.5					1	1			4	See Plan Insert Sheet for Type D Design
17.51	17.52	Rt.	75	75						1	1		1	
17.52	17.52	Lt.	37.5	37.5						1	1		1	
17.52	17.52	MLt.	56.25	56.25						1	1		1	
17.52	17.53	MRt.	37.5	37.5						1	1		1	
17.55	17.89	Lt.	1850	1825			1			1			2	
17.55	17.62	MLt.	387.5	362.5			1			1			5	
17.71	17.89	Rt.	962.5	925			1	1					10	
18.11	18.26	Rt.	850	812.5			1	1					9	
18.25	18.30	Lt.	325	350			1	1					5	
18.47	18.61	Rt.	787.5	750			1	1					9	
18.52	18.63	Lt.	612.5	575			1	1					8	
18.76	18.78	Lt.	162.5	125			1	1					2	
SUBTOTAL NHS			10943.75	9618.75	287.5	487.5	15	10	5	15	8		111	
SUBTOTAL CARRIED TO SHEET 19			16768.75	15331.25	412.50	487.50	21	16	5	15	8	3	176	

CALCULATED ANS CHECKED SKW

ESTIMATED QUANTITIES

HAS-22-15.25

18
31

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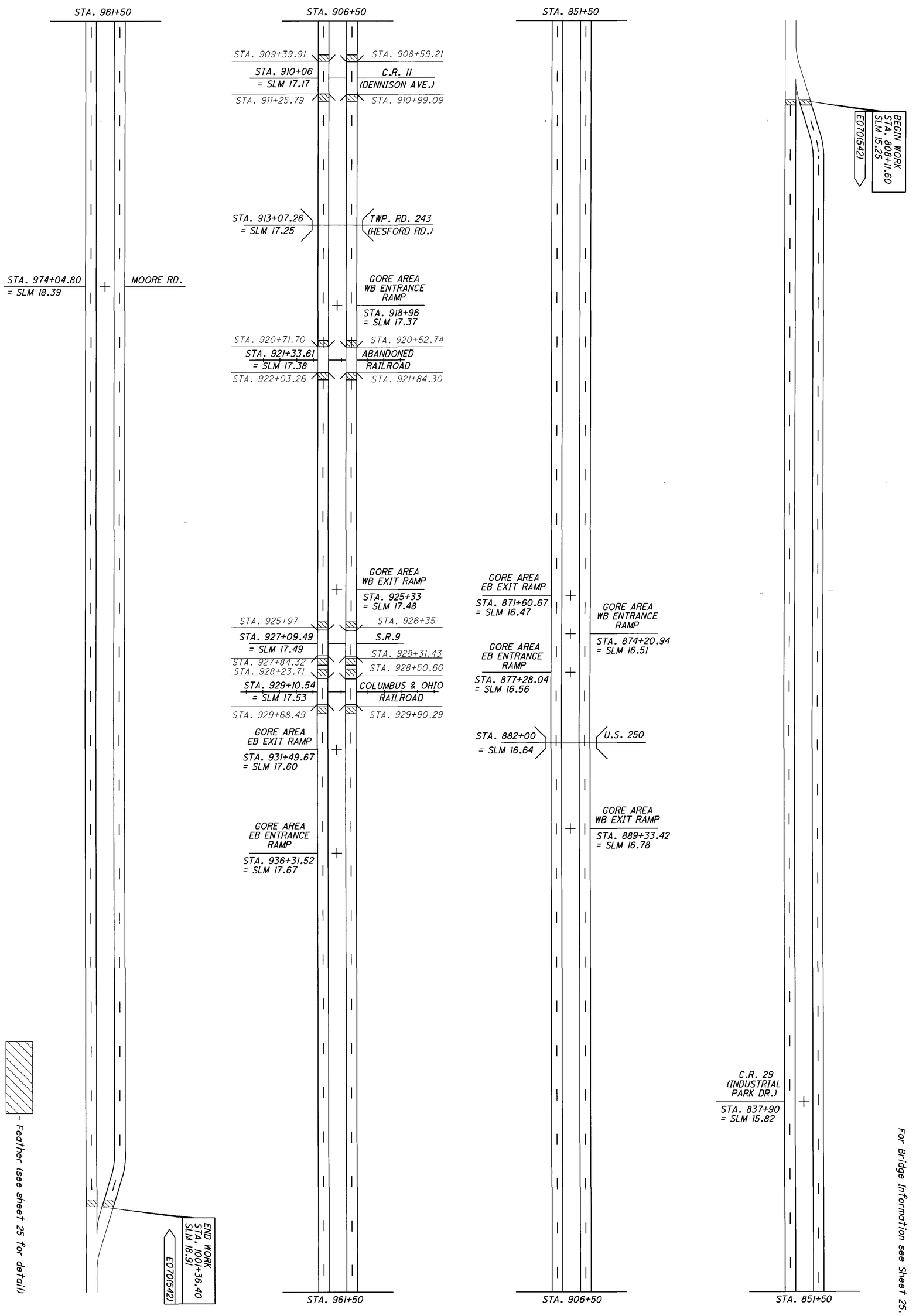
STATION FROM	STATION TO	SIDE (M = Median)	202 GUARDRAIL REMOVED	606 GUARDRAIL, TYPE 5, AS PER PLAN	606 GUARDRAIL, TYPE 5A, AS PER PLAN	606 GUARDRAIL, BARRIER DESIGN, TYPE 5	606 ANCHOR ASSEMBLY, TYPE E-98	606 ANCHOR ASSEMBLY, TYPE T	606 BRIDGE TERMINAL ASSEMBLY, TYPE D	606 BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 BRIDGE TERMINAL ASSEMBLY, TYPE 2	606 IMPACT ATTENUATOR, TYPE 1-98 (BIDIRECTIONAL)	626 BARRIER REFLECTOR TYPE A	COMMENTS
			FT.	FT.	FT.	FT.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	See Anchor Assembly Note on Sheet 24.
U.S. 250 Interchange														
Ramp 'C' 6+62.50	'C' 9+60.88	Rt.	300	275			1						7	
Ramp 'D' 4+24	0+00	Lt.	425	425									9	
'D' 0+00 = U.S. 250 509+42.96	508+08	Lt.	137.5	137.5									3	Connect to existing, before radius at C.R. 2
Ramp 'C' 6+62.50	8+35	Lt.	175	137.5			1	1					5	
U.S. 250 506+49.17	509+42.96	Rt.	287.5	287.5						1			6	
Ramp 'D' 0+00	13+37.5	Rt.	1337.5	1337.5						1			27	
Ramp 'D' 5+13	8+47	Lt.	362.5	312.5			1	1					8	Protect Type T on Ramp 'C'
S.R. 9 Interchange														
Ramp 'E' 0+11	13+25	Lt.	1295	1295							1		26	Connect to existing, 37.5' at 30' Radius
Ramp 'E' 0+11	6+82.09	Rt.	762.5	762.5									16	Connect to existing, 37.5' at 30' Radius
Ramp 'F' 5+22	9+30.28	Lt.	412.5	412.5					1				9	See Plan Insert Sheet for Type D Design
Ramp 'F' 2+80.60	3+68	Lt.	87.5	75				1	1				2	See Plan Insert Sheet for Type D Design
Ramp 'F' 5+15	6+61	Rt.	150	125			1		1				15	See Plan Insert Sheet for Type D Design
Ramp 'G' 3+73	5+98	Rt.	237.5	225				1			1		5	See Plan Insert Sheet for Type D Design
Ramp 'G' 12+74.20	14+86.7	Rt.	225	212.5			1			1			6	
Ramp 'G' 14+78	14+86.7	Lt.	212.5	200				1			1		4	
Ramp 'G' 15+77.50	17+02.50	Rt.	125	100			1			1			4	
SUBTOTAL NHS			6532.5	6320			6	5	3	4	3		152	
SUBTOTAL THIS SHEET			6532.5	6320			6	5	3	4	3		152	
SUBTOTAL CARRIED FROM SHEET 18			16768.75	15331.25	412.50	487.50	21	16	5	15	8	3	176	
TOTALS CARRIED TO GENERAL SUMMARY			23301	21651.25	412.50	487.50	27	21	8	19	11	3	328	

CALCULATED ANS CHECKED SKW

ESTIMATED QUANTITIES

HAS-22-15.25



20 / 31	HAS-22-15.25	PLAN

CALCULATED ANS
CHECKED SKW

Ramp 'B' Curve Data
P.I. STA. 9+58.16
Δ = 16° 12' (RT)
Dc = 10° 00'
R = 572.96'
T = 81.54'
L = 162.00'
E = 5.77'
Ramp 'B' Curve Data
P.I. STA. 3+22.59
Δ = 16° 12' (LT)
Dc = 25° 00'
R = 229.18'
T = 32.62'
L = 64.80'
E = 2.31'
End Acceleration Lane
Sta. 868+50, 44' Lt. ℄ U.S. 22
Sta. 0+00 ℄ Ramp 'B' =
Sta. 870+75, 56' Lt. ℄ U.S. 22
PC Sta. 2+89.97 ℄ Ramp 'B'
= Sta. 873+64.97 ℄ U.S. 22
PT Sta. 3+54.77
Ramp Nose
Sta. 3+42.72 ℄ Ramp 'B'=
Sta. 874+20.94 ℄ U.S. 22
Sta. 10+00 C.R. 2
Sta. 7+98.84 ℄ Ramp 'B'
C.R. 2
Sta. 7+75
PC Sta. 8+76.62
PT Sta. 10+38.62
Ramp 'B'
℄ U.S. 22
Intersects with ℄ U.S. 250
Sta. 12+67.68 ℄ Ramp 'B'
℄ U.S. 250
Intersects with ℄ U.S. 250
Sta. 0+00 ℄ Ramp 'A'
BRIDGE NO.
HAS-250-1763
Conc.
Sta. 1+54.70
Ramp 'A'
Ramp Nose
Sta. 6+59.58 ℄ Ramp 'A' =
Sta. 889+33.42 ℄ U.S. 22
Sta. 11+07.05 ℄ Ramp 'A' =
Sta. 893+75, 56' Lt. ℄ U.S. 22
Begin Deceleration Lane
Sta. 894+75, 44' Lt. ℄ U.S. 22
N 36° 35' 05" E
N 58° 16' 05" E
Begin Deceleration Lane
Mainline Sta. 867+00, 44' Rt.
Sta. 0+00 ℄ Ramp 'C' =
Mainline Sta. 868+00, 56' Rt.
PC Sta. 2+57.66 ℄ Ramp 'C'
= Sta. 870+57.66, 56' Rt. ℄ U.S. 22
PT Sta. 4+29.66
Ramp 'C'
Ramp Nose
Sta. 3+54.49 =
℄ Sta. 871+60.67
Ramp 'D'
Ramp Nose
Sta. 9+18.89 ℄ Ramp 'D' =
Sta. 877+28.04 ℄ U.S. 22
PT Sta. 9+72.00 ℄ Ramp 'D'
= Sta. 877+84.01, 56' Rt. ℄ U.S. 22
Sta. 20+00 C.R. 2
Sta. 507+50 U.S. 250
C.R. 2
Sta. 13+87.99 ℄ Ramp 'D' =
Sta. 882+00, 56' Rt. ℄ U.S. 22
TS Sta. 883+21.49
End Acceleration Lane
Sta. 884+25, 44' Rt. ℄ U.S. 22
SC Sta. 886+21.49
CS Sta. 894+05.66
ST Sta. 897+05.66
PC Sta. 0+00.00, 12' Lt. ℄ Ramp 'D'
Sta. 509+42.96 ℄ U.S. 250
Sta. 2+20.81 ℄ Ramp 'D'
Sta. 9+60.88, 18.5' Lt. ℄ Ramp 'C' =
Sta. 4+24.00, 18.5' Lt. ℄ Ramp 'D'
Ramp 'C' Curve Data
P.I. STA. 3+47.94
Δ = 43° 00' (RT)
Dc = 25° 00'
R = 229.18'
T = 90.28'
L = 172.00'
E = 17.14'
Ramp 'D' Curve Data
Δ = 243° 00' (RT)
Dc = 25° 00'
R = 229.18'
L = 972.00'
U.S. 22 CURVE DATA
P.I. STA. 890+20.38
Δ = 21° 41' 00" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
Ls = 300.00'
θs = 3° 00' 00"
LT = 200.03'
ST = 100.03'
x = 299.92'
y = 5.23'
k = 149.99'
p = 1.31'
Δc = 15° 41' 00" (RT)
Lc = 784.17'
Ts = 698.89'
Es = 53.40'
HORIZONTAL SCALE IN FEET
0 50 100 200
CALCULATED ANS
CHECKED SKW
U.S. 22 AND U.S. 250 INTERCHANGE
HAS-22-15.25
21
31
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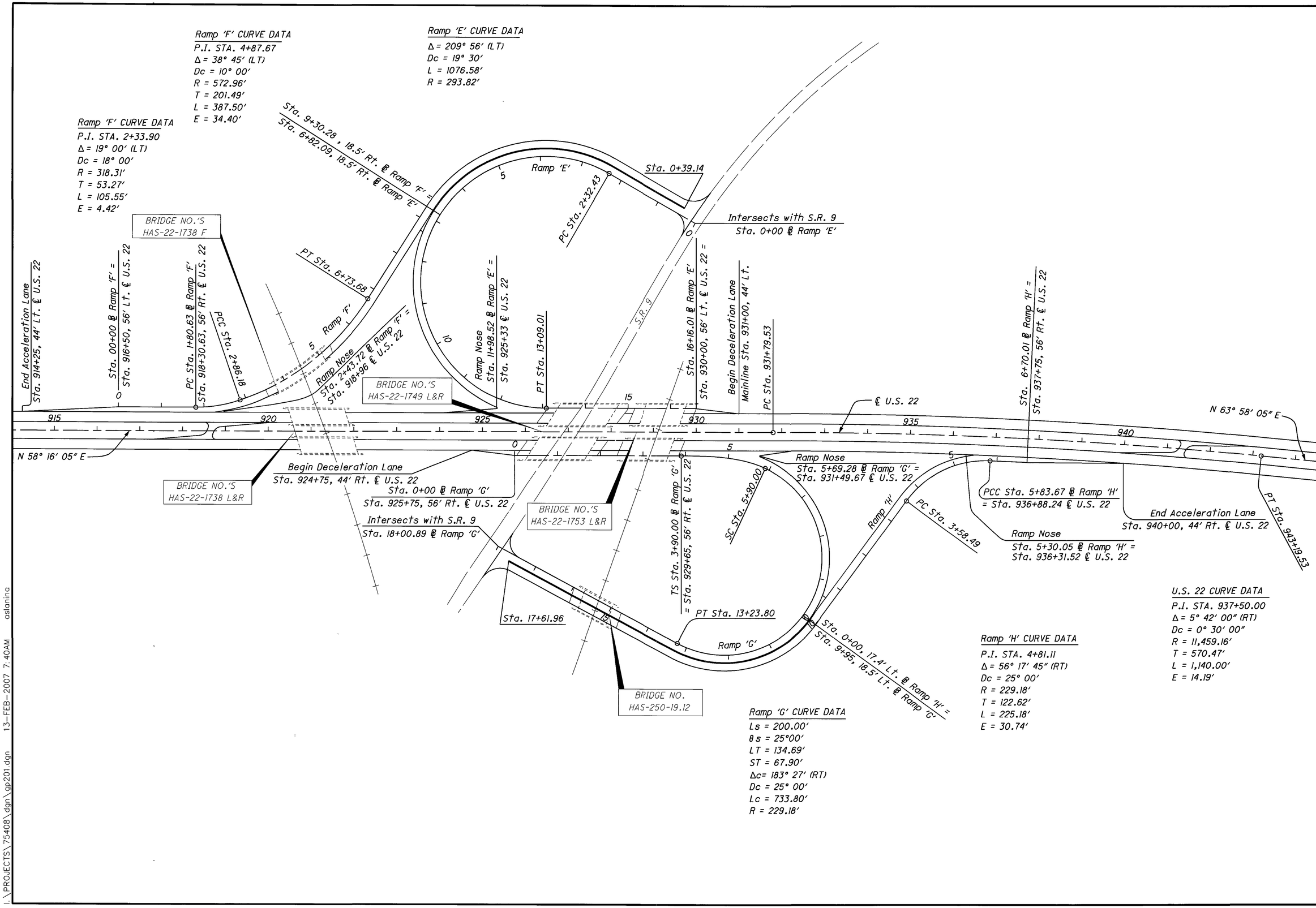
Ramp 'F' CURVE DATA
P.I. STA. 4+87.67
Δ = 38° 45' (LT)
Dc = 10° 00'
R = 572.96'
T = 201.49'
L = 387.50'
E = 34.40'
Ramp 'E' CURVE DATA
Δ = 209° 56' (LT)
Dc = 19° 30'
L = 1076.58'
R = 293.82'
Ramp 'F' CURVE DATA
P.I. STA. 2+33.90
Δ = 19° 00' (LT)
Dc = 18° 00'
R = 318.31'
T = 53.27'
L = 105.55'
E = 4.42'
Sta. 9+30.28 , 18.5' Rt. ℄ Ramp 'F' =
Sta. 6+82.09, 18.5' Rt. ℄ Ramp 'E'
Ramp 'E'
Sta. 0+39.14
PC Sta. 2+32.43
Intersects with S.R. 9
Sta. 0+00 ℄ Ramp 'E'
BRIDGE NO.'S
HAS-22-1738 F
End Acceleration Lane
Sta. 914+25, 44' Lt. ℄ U.S. 22
Sta. 00+00 ℄ Ramp 'F' =
Sta. 916+50, 56' Lt. ℄ U.S. 22
PC Sta. 1+80.63 ℄ Ramp 'F'
Sta. 918+30.63, 56' Rt. ℄ U.S. 22
PCC Sta. 2+06.81
PT Sta. 6+73.68
Ramp 'F'
Ramp Nose
Sta. 2+43.72 ℄ Ramp 'F' =
Sta. 918+96 ℄ U.S. 22
BRIDGE NO.'S
HAS-22-1749 L&R
Ramp Nose
Sta. 11+98.52 ℄ Ramp 'E' =
Sta. 925+33 ℄ U.S. 22
PT Sta. 13+09.01
S.R. 9
Sta. 16+16.01 ℄ Ramp 'E' =
Sta. 930+00, 56' Lt. ℄ U.S. 22
Begin Deceleration Lane
Mainline Sta. 931+00, 44' Lt.
PC Sta. 931+79.53
℄ U.S. 22
Sta. 6+70.01 ℄ Ramp 'H' =
Sta. 937+75, 56' Rt. ℄ U.S. 22
N 63° 58' 05" E
915
920
925
930
935
940
N 58° 16' 05" E
Begin Deceleration Lane
Sta. 924+75, 44' Rt. ℄ U.S. 22
Sta. 0+00 ℄ Ramp 'G'
Sta. 925+75, 56' Rt. ℄ U.S. 22
Intersects with S.R. 9
Sta. 18+00.89 ℄ Ramp 'G'
BRIDGE NO.'S
HAS-22-1738 L&R
BRIDGE NO.'S
HAS-22-1753 L&R
TS Sta. 3+90.00 ℄ Ramp 'G' =
= Sta. 929+65, 56' Rt. ℄ U.S. 22
SC Sta. 5+90.00
Ramp Nose
Sta. 5+69.28 ℄ Ramp 'G' =
Sta. 931+49.67 ℄ U.S. 22
Ramp 'H'
PC Sta. 3+58.49
PCC Sta. 5+83.67 ℄ Ramp 'H'
= Sta. 936+88.24 ℄ U.S. 22
Ramp Nose
Sta. 5+30.05 ℄ Ramp 'H' =
Sta. 936+31.52 ℄ U.S. 22
End Acceleration Lane
Sta. 940+00, 44' Rt. ℄ U.S. 22
PT Sta. 943+19.53
Sta. 17+61.96
PT Sta. 13+23.80
Ramp 'G'
Sta. 0+00, 17.4' Lt. ℄ Ramp 'H' =
Sta. 9+95, 18.5' Lt. ℄ Ramp 'G'
BRIDGE NO.
HAS-250-19.12
Ramp 'G' CURVE DATA
Ls = 200.00'
θs = 25°00'
LT = 134.69'
ST = 67.90'
Δc= 183° 27' (RT)
Dc = 25° 00'
Lc = 733.80'
R = 229.18'
Ramp 'H' CURVE DATA
P.I. STA. 4+81.11
Δ = 56° 17' 45" (RT)
Dc = 25° 00'
R = 229.18'
T = 122.62'
L = 225.18'
E = 30.74'
U.S. 22 CURVE DATA
P.I. STA. 937+50.00
Δ = 5° 42' 00" (RT)
Dc = 0° 30' 00"
R = 11,459.16'
T = 570.47'
L = 1,140.00'
E = 14.19'
0
50
100
200
HORIZONTAL
SCALE IN FEET
CALCULATED
ANS
CHECKED
SKW
U.S. 22 AND S.R. 9 INTERCHANGE
HAS-22-15.25
22
31
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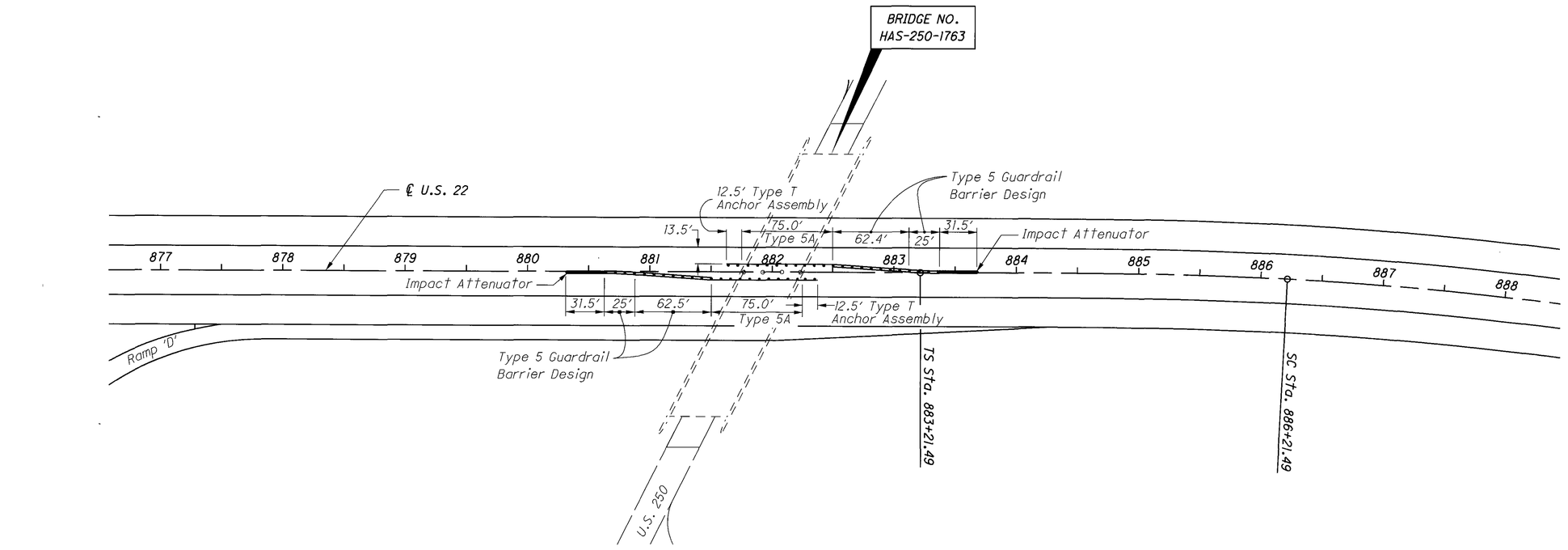
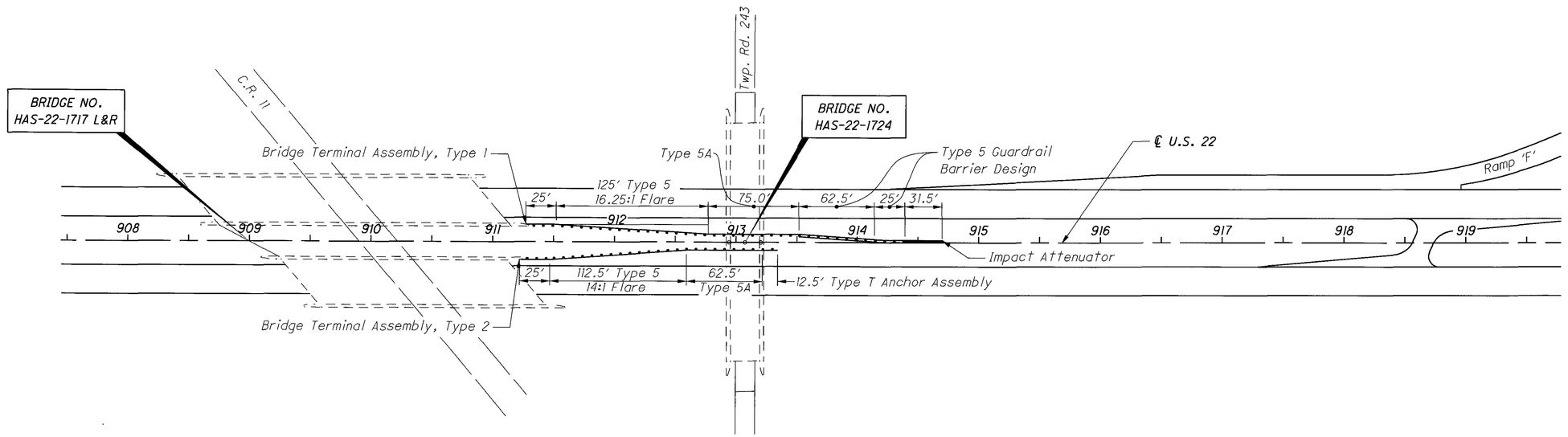
See GR-6.2 for Details



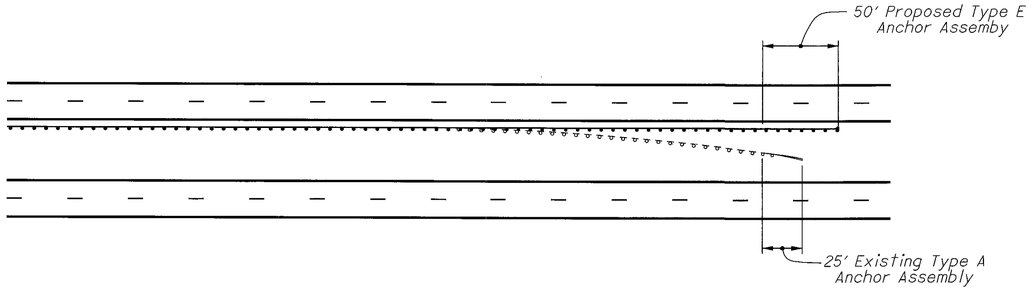


HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED ANS
CHECKED SKW

GUARDRAIL DETAILS

HAS-22-15.25



REPLACEMENT OF TYPE-A ANCHOR ASSEMBLIES WITH TYPE-E98 ANCHOR ASSEMBLIES

Unless otherwise noted, the Contractor shall replace Type A Anchor Assemblies (25' long) with Type E98 Anchor Assemblies (50' long), such that the new Type E-98 will connect to the Type 5 Guardrail at the same location that the existing Type A was connected to the Type 5 Guardrail (thus extending the guardrail run 25 feet).

HORIZONTAL SCALE IN FEET
0 25 50 100

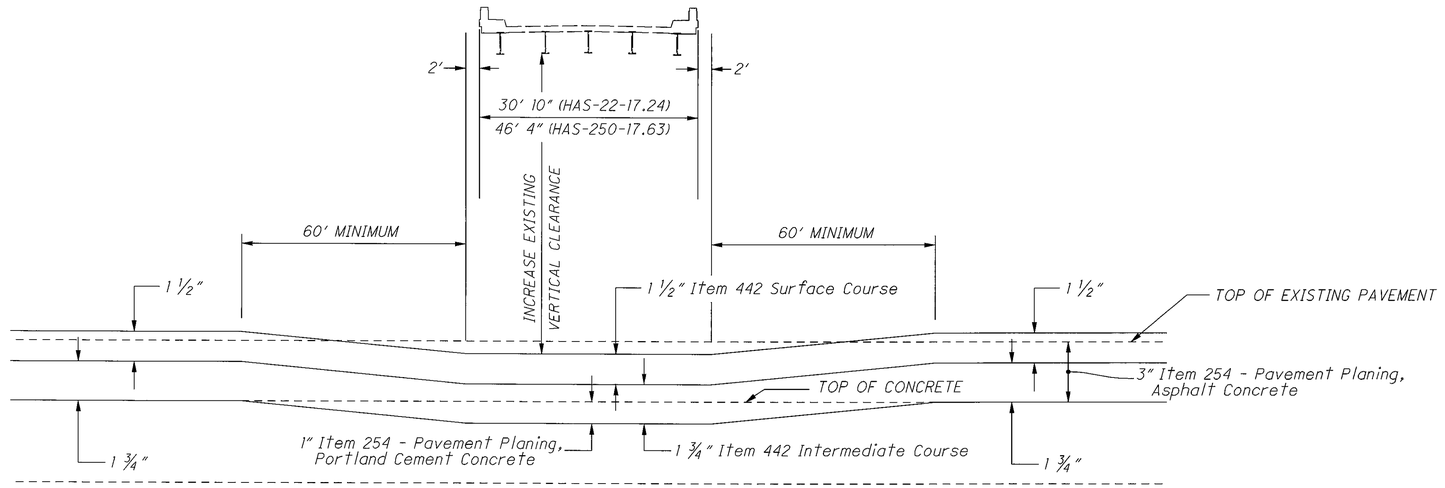
CALCULATED ANS
CHECKED SKW

GUARDRAIL DETAIL

HAS-22-15.25

24/31

(HAS-22-1724)
(HAS-250-1763)
Remove 4" and Replace with 3¼" Under Structure



DETAIL FOR PLANING AND RESURFACING UNDER STRUCTURE
(NOT TO SCALE)

CALCULATIONS

ITEM 254 - PAVEMENT PLANING, PORTLAND CEMENT CONCRETE

HAS-22-1724

154.83' x 24' x 2 ÷ 9 = 825.76 Sq. Yd.

HAS-250-1763

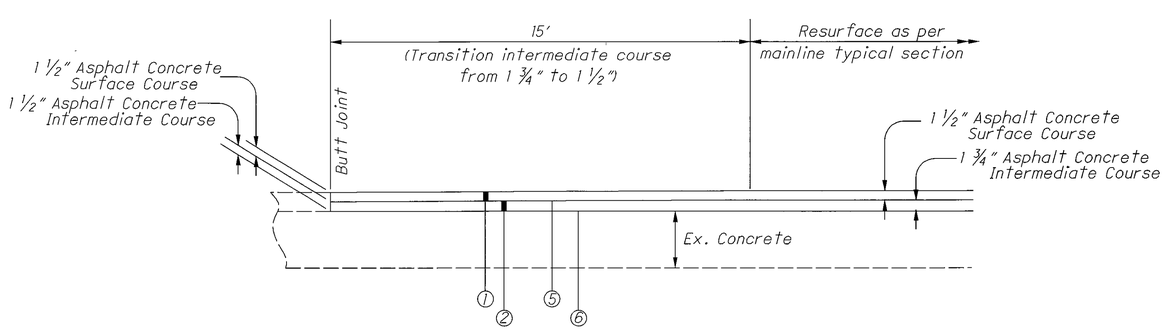
170.33' x 24' x 2 ÷ 9 = 908.43 Sq. Yd.

TOTAL = 1734.19 Sq. Yd. (Use 1734 Sq. Yd.)

(QUANTITY CARRIED TO GENERAL SUMMARY)

STRUCTURE NO.	STRUCTURE FILE NUMBER	COMMENTS
HAS-22-1717 L	3400875	OMIT BRIDGE
HAS-22-1717 R	3400905	OMIT BRIDGE
HAS-22-1724	3400964	INCREASE EXISTING CLEARANCE, SEE DETAIL ABOVE
HAS-22-1738 F	3400999	OMIT BRIDGE
HAS-22-1738 L	3401022	OMIT BRIDGE
HAS-22-1738 R	3401057	OMIT BRIDGE
HAS-22-1749 L	3401081	OMIT BRIDGE AND APPROACH SLABS
HAS-22-1749 R	3401111	OMIT BRIDGE AND APPROACH SLABS
HAS-22-1753 L	3401146	OMIT BRIDGE AND APPROACH SLABS
HAS-22-1753 R	3401170	OMIT BRIDGE AND APPROACH SLABS
HAS-250-1763	3401863	INCREASE EXISTING CLEARANCE, SEE DETAIL ABOVE

FEATHER DETAIL



FEATHER DETAIL TO BE USED AT BEGINNING AND END OF PROJECT, AND AT ALL BRIDGES OR APPROACH SLABS

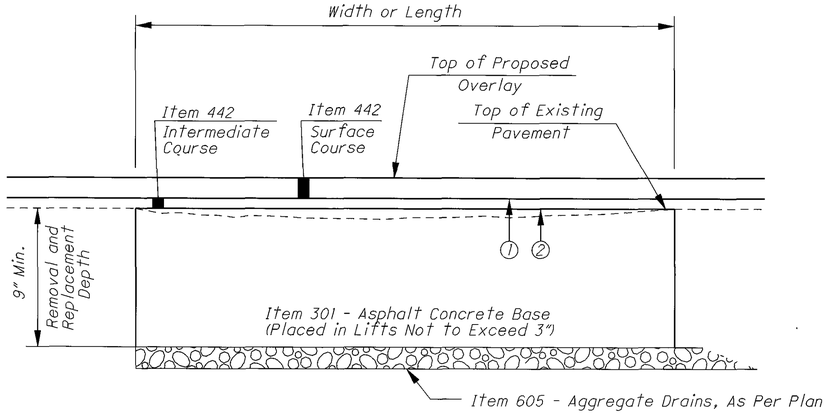
For Legend see Sheet 4.

CALCULATED ANS CHECKED SKW

BRIDGE TRANSITION/FEATHER DETAIL

HAS-22-15.25

25
31



PAVEMENT REPAIR TYPICAL

LEGEND

① Item 407 - Tack Coat for Intermediate Course

② Item 407 - Tack Coat

ESTIMATED QUANTITIES

Non-NHS, Item 253 . . . Pavement Repair - 54 CU. YD.
Non-NHS, Item 605 . . . Aggregate Drains, As Per Plan - 144 FT.

NHS, Item 253 . . . Pavement Repair - 96 CU. YD.
NHS, Item 605 . . . Aggregate Drains, As Per Plan - 256 FT.

(Total Carried to General Summary) - Pavement Repair - 150 CU. YD.
Aggregate Drains, As Per Plan - 400 FT.

ITEM 253 - PAVEMENT REPAIR

The pavement repair locations and estimated quantities were obtained by preliminary field review and shall be considered approximate. A final field review will be performed by ODOT prior to construction and final locations will be given to the Contractor at the Pre-Construction Conference.

This work consists of removing existing asphalt concrete, brick, portland cement concrete, or aggregate pavement courses; shaping and compacting the exposed material; and placing new asphalt concrete pavement or aggregate and asphalt concrete pavement courses.

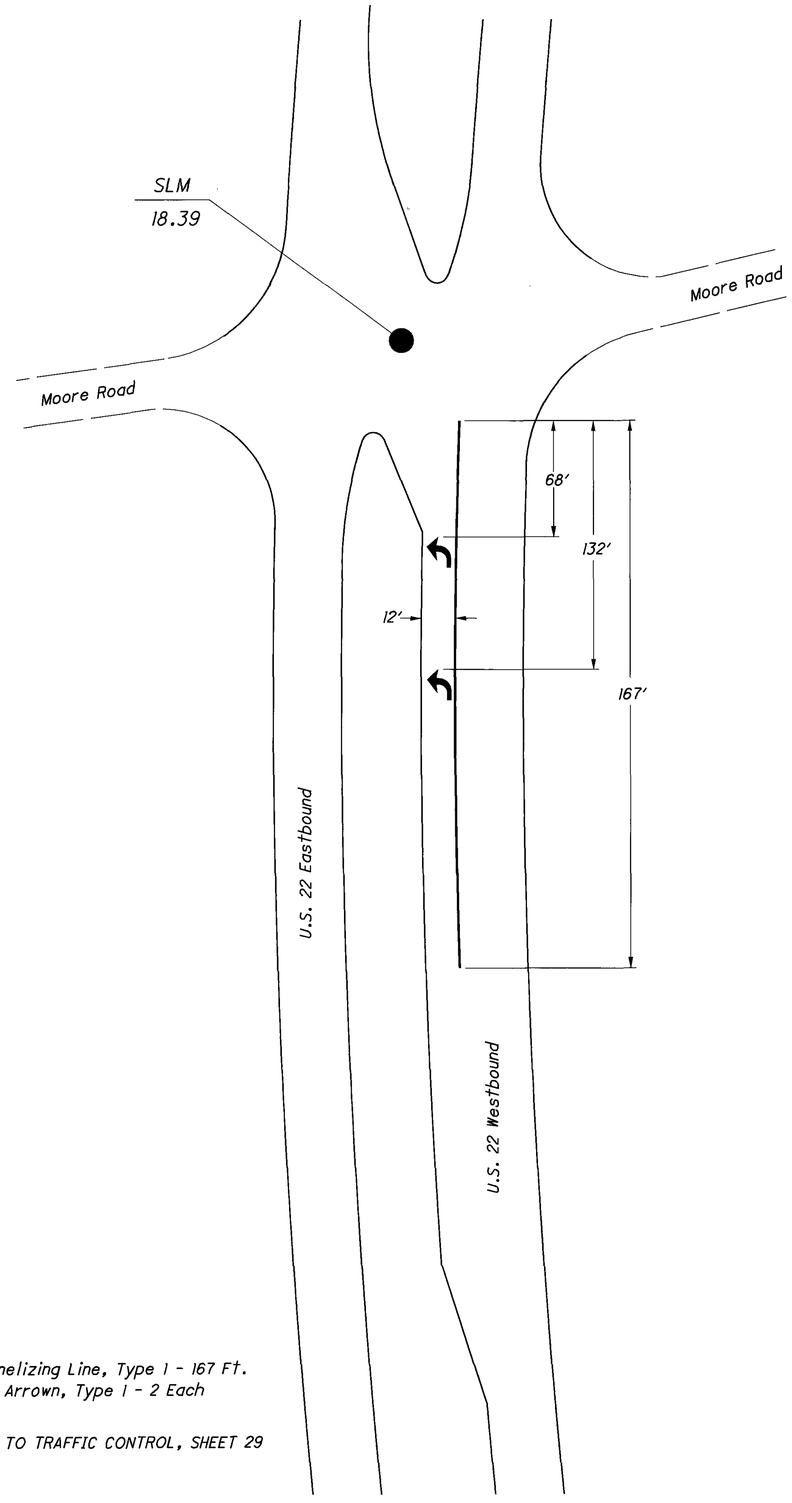
If needed an aggregate drain shall be installed in accordance with CMS 605.07.

The above estimated quantity is to be used as directed by the Engineer. Final payment for the above items shall be for the accepted quantity complete in place.

ITEM 605 - AGGREGATE DRAINS, AS PER PLAN

This item shall be used in accordance with Item 253, Pavement Repair and Item 605.07 of the CMS. The aggregate shall be No. 57 size gravel, unless otherwise directed by the Engineer.

The above estimated quantity is to be used as directed by the Engineer. Final payment for the above items shall be for the accepted quantity completed in place.



ITEM 642 - Channelizing Line, Type 1 - 167 Ft.
ITEM 642 - Lane Arrown, Type 1 - 2 Each

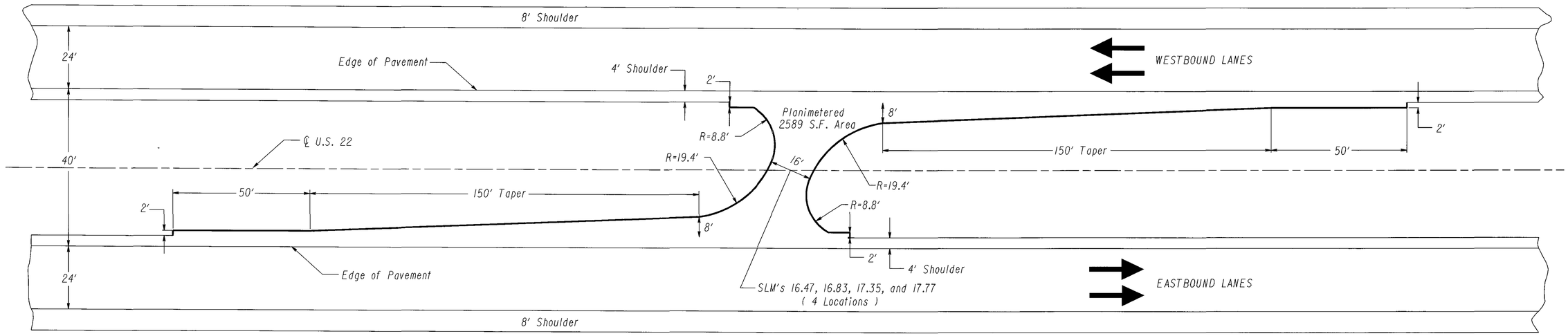
TOTALS CARRIED TO TRAFFIC CONTROL, SHEET 29

CALCULATED ANS
CHECKED SKW

PAVEMENT REPAIR / PAVEMENT MARKING DETAILS

HAS-22-15.25

26
31



CALCULATIONS

ITEM 442 - 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446), AS PER PLAN

2589 Sq. Ft. x 1½" ÷ 12 ÷27 x 4 locations = 47.94 Cu. Yd. (Use 48 Cu. Yd.)

ITEM 442 - 14/4ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE B (446)

2589 Sq. Ft. x 1¾" ÷ 12 ÷27 x 4 locations = 55.94 Cu. Yd. (Use 56 Cu. Yd.)

ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE

2589 Sq. Ft. ÷ 9 x 0.04 Gal./Sq. Yd. x 4 locations = 46.03 Gallon (Use 46 Gallon)

ITEM 407 - TACK COAT

2589 Sq. Ft. ÷ 9 x 0.075 Gal./Sq. Yd. x 4 locations = 86.3 Gallon (Use 86 Gallon)

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (3" NOMINAL DEPTH)

2589 Sq. Ft. ÷ 9 x 4 locations = 1150.67 Sq. Yd. (Use 1151 Sq. Yd.)

(QUANTITIES CARRIED TO GENERAL SUMMARY)

CALCULATED ANS
CHECKED SKW

TYPICAL MEDIAN CROSSOVER DETAIL

HAS-22-15.25

CALCULATED ANS | CHECKED SKW

INTERSECTION DETAILS

WESTBOUND LANES

EASTBOUND LANES

332.24 Sq. Yd.
SLM 15.84

C.R. 29
Industrial Park Road

Moore Road

266.74 Sq. Yd.
SLM 18.39

Sta. 974+34.66

WESTBOUND LANES

EASTBOUND LANES

Moore Road

- Planimetered Area for Cross-Over

For Resurfacing Quantites See Sheet 12

HAS-22-15.25

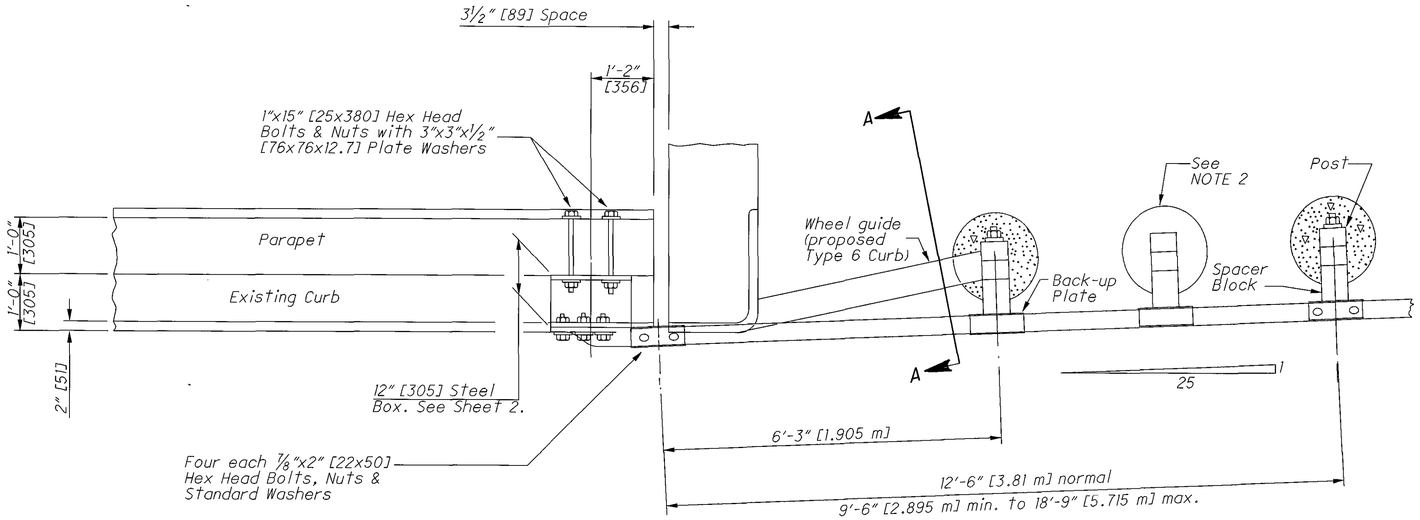
NOTES: LT AND RT INDICATES SIDE IN THE DIRECTION OF TRAFFIC FLOW.
LAY OUT GORE AREAS AS PER 3B-8 AND 3B-9 OF THE OMUTCD.

LOCATION	SLM OR STATION FROM	SLM OR STATION TO	SIDE	ITEM 642 EDGE LINE, TYPE 1 (YELLOW)	ITEM 642 EDGE LINE, TYPE 1 (WHITE)	ITEM 642 LANE LINE, TYPE 1	ITEM 642 CENTER LINE, TYPE 1	ITEM 642 CHANNELIZING LINE, TYPE 1	ITEM 642 STOP LINE, TYPE 1	ITEM 642 ISLAND MARKING, TYPE 1	ITEM 642 LANE ARROW, TYPE 1	ITEM 642 TRANSVERSE/DIAGONAL LINE, TYPE 1	ITEM 614 WORK ZONE LANE LINE, CLASS I, 642 PAINT	ITEM 614 WORK ZONE EDGE LINE, CLASS I, 642 PAINT (YELLOW)	ITEM 614 WORK ZONE EDGE LINE, CLASS I, 642 PAINT (WHITE)	ITEM 614 WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT	ITEM 614 WORK ZONE CENTER LINE, CLASS I, 642 PAINT	ITEM 614 WORK ZONE STOP LINE, CLASS I, 642 PAINT	ITEM 621 RPM SPACING	ITEM 621 RPM 2 WAY WHITE/RED	ITEM 621 RPM 2 WAY YELLOW/RED	ITEM 621 RPM 2 WAY YELLOW/YELLOW	REMARKS
				MILE	MILE	MILE	MILE	FT	FT	SQ FT	EACH	FT	MILE	MILE	MILE	FT	MILE	FT	FT	EACH	EACH	EACH	
BEGIN PROJECT	TRANSITION AREA FROM 2 LANES TO 4						0.11					250											
US 22 EB	15.25	16.56	CTR			1.31							3.93						80	88			LANE LINE
	15.25	16.56	LT	1.31										3.93									
	15.25	16.56	RT		1.31										3.93								
US 22 WB	15.25	16.56	CTR			1.31							3.93						80	88			LANE LINE
	15.25	16.56	LT	1.31										3.93									
	15.25	16.56	RT		1.31										3.93								
CR 29	INTERSECTION							130	47														
																				176	0	16	RPM-SUBTOTALS
SUBTOTAL NON-NHS				**5.24**		**2.62**	**0.11**	**130**	**47**			**250**	**7.86**	**15.72**						**192**			
US 22 EB	16.56	18.91	CTR			2.35							7.05						80	157			LANE LINE
	16.56	18.91	LT	2.35										7.05									
	16.56	18.91	RT		2.35										7.05								
US 22 WB	16.56	18.91	CTR			2.35							7.05						80	157			LANE LINE
	16.56	18.91	LT	2.35										7.05									
	16.56	18.91	RT		2.35										7.05								
RAMP A	GORE AREA					0.01		500					0.03			1500			40	14			CHAN. LINE
	0+12.00	6+59.58	LT	0.12										0.36					80		8		YEL. EDGE LINE
	0+12.00	6+59.58	RT		0.12				42						0.36								
RAMP B	GORE AREA					0.04		164					0.12			492			40	6			CHAN. LINE
	3+42.72	12+55.68	RT		0.17				38						0.51			114					
	7+75.00	12+55.68	LT		0.09										0.27								
	7+98.84	12+55.68	CTR				0.09										0.27						
	3+42.72	7+75.00	LT	0.08										0.24					80		7		YEL. EDGE LINE
RAMP C	GORE AREA					0.03		200					0.09			600			40	6			CHAN. LINE
	3+54.49	9+60.88	LT	0.11										0.33					80		9		YEL. EDGE LINE
	3+54.49	9+60.88	RT		0.11										0.33								
RAMP D	GORE AREA					0.02		140					0.06			420			40	5			CHAN. LINE
	0+00	2+20.81	CTR				0.06					29					0.12		80			5	DBL. YEL. LINE
	0+00	4+24.00	LT		0.08										0.24								
	2+20.81	4+24.00	CTR	0.08						813				0.24					80		7		YEL. EDGE LINE
	0+00	9+18.89	RT		0.17										0.51								
	4+24.00	9+18.89	LT	0.09										0.27					80		7		YEL. EDGE LINE
RAMP E	GORE AREA					0.03		340					0.09			1020			40	10			CHAN. LINE
	0+12.00	6+82.09	RT		0.13				26						0.39			78					
	0+12.00	6+82.09	LT		0.13										0.39								
	0+39.14	6+82.09	CTR	0.24						2572				0.72					80		17		YEL. EDGE LINE
	6+82.09	11+98.52	RT		0.10										0.30								
	6+82.09	11+98.52	LT	0.10										0.30					80		8		YEL. EDGE LINE
RAMP F	GORE AREA					0.04		200					0.12			600			40	6			CHAN. LINE
	2+43.72	9+30.28	RT		0.13										0.39								
	2+43.72	9+30.28	LT	0.13										0.39					80		10		YEL. EDGE LINE
RAMP G	GORE AREA					0.04		320					0.12			960			40	9			CHAN. LINE
	5+69.28	9+95.00	RT		0.08										0.24								
	5+69.28	9+95.00	LT	0.08										0.24					80		7		YEL. EDGE LINE
	9+95.00	17.61.96	CTR	0.29						3068				0.87					80		21		YEL. EDGE LINE
	9+95.00	17+88.89	RT		0.15				23						0.45			69					
	9+95.00	17+88.89	LT		0.15										0.45								
RAMP H	GORE AREA					0.01		170					0.03			510			40	6			CHAN. LINE
	0+00	5+30.05	RT		0.10										0.30								
	0+00	5+30.05	LT	0.10										0.30					80		8		YEL. EDGE LINE
MOORE RD.	INTERSECTION							167	60		2					501		180	40	6			CHAN. LINE
END PROJECT	TRANSITION AREA FROM 4 LANES TO 2						0.06					283											
																				382	109	5	RPM-SUBTOTALS
SUBTOTAL NHS				**12.53**		**4.92**	**0.21**	**2201**	**189**	**6453**	**2**	**312**	**14.76**	**37.59**		**6603**	**0.39**	**441**		**496**			
TOTALS CARRIED TO GENERAL SUMMARY				**17.77**		**7.54**	**0.32**	**2331**	**236**	**6453**	**2**	**562**	**22.62**	**53.31**		**6603**	**0.39**	**441**		**688**			

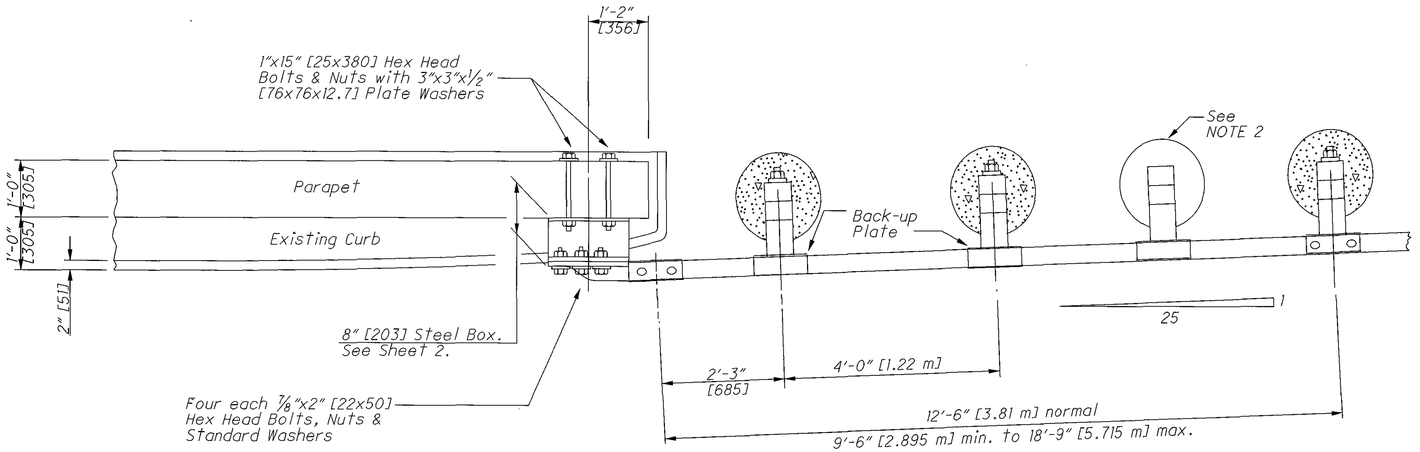
CALCULATED SKW
CHECKED ANS

TRAFFIC CONTROL

HAS-22-15.25



TYPE C



TYPE D

All metric dimensions (in brackets [ ]) are in millimeters unless otherwise noted.

NOTES

PAYMENT: Payment for Item 606 - Bridge Terminal Assembly, Type D , Each, shall include the additional cost in excess of normal guardrail cost, such as: additional or heavier posts, concrete encasement, extra rail, steel box, curb, embankment, terminal connector, anchors and other hardware, etc.

DETAILS NOT SHOWN: See SCD GR-1.1 and other Drawings pertaining to the design of specific guardrail types.

GUARDRAIL TERMINATION: As directed by the Engineer. The 12'-6" [3.81 m] normal rail section may vary as shown to facilitate connection of or reconstruction of existing approach guardrail. The 1'-2" [356] terminal connector location dimension may be increased to avoid existing parapet steel.

STEEL BOX: Appropriate size steel box, galvanized after welding any two opposite corners, shall be mounted on the the parapet so the top of rail is 27¾" [706] above the bridge deck. See Detail on Sheet 2 for Types E & F.

SPACER BLOCK: Block size may be increased if necessary to locate post beyond wide approach slab.

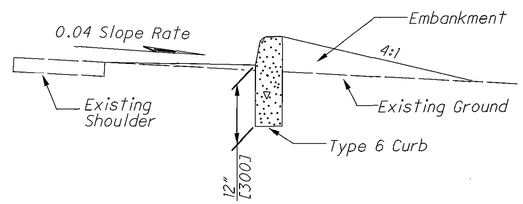
POSTS: Shall be 6"x8" [150x200] wood or W6x15 [W150 x22.5] steel (except Note 1 post) of the same material type as used on approach guardrail, with 4" [100] min. concrete encasement.

NOTE 1: Use the inlet mounted post detail as shown on SCD GR-1.1. Use a W6x9 [W150x13.5] post instead, with the length needed to mount top of rail at 27¾" [706] above bridge deck. See TYPE F, on Sheet 2.

NOTE 2: Place one additional encased post halfway between adjacent posts when the 12'-6" [3.81 m] normal rail section is increased.

SELF-DRILLING ANCHORS: Meeting requirements of CMS 712.01, or Group VIII Type 1 anchor per FF-S-325, with ⅞"x1½" [22x38] bolts with washers may be substituted for the ⅞"x14" [22x355] bolt shown in the parapet for Type F (Sheet 2).

Anchor installations not satisfactory to the Engineer shall be replaced with bolts as shown extending through the parapet or as directed by the Engineer.



SECTION A-A

OFFICE OF ROADWAY ENGINEERING

DESIGNED | REVIEWED

REVISION DATE 10-20-06 | CHECKED

PLAN INSERT SHEET

BRIDGE TERMINAL ASSEMBLIES (Types C, D, E & F)

HAS-22-15.25

1 / 2

30 / 31

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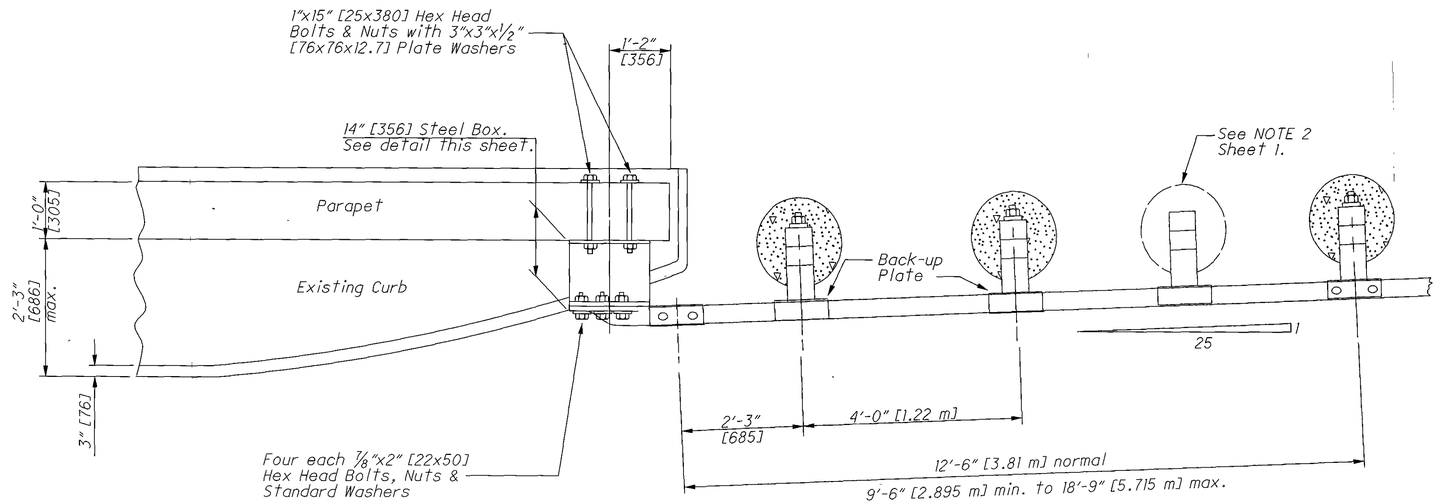
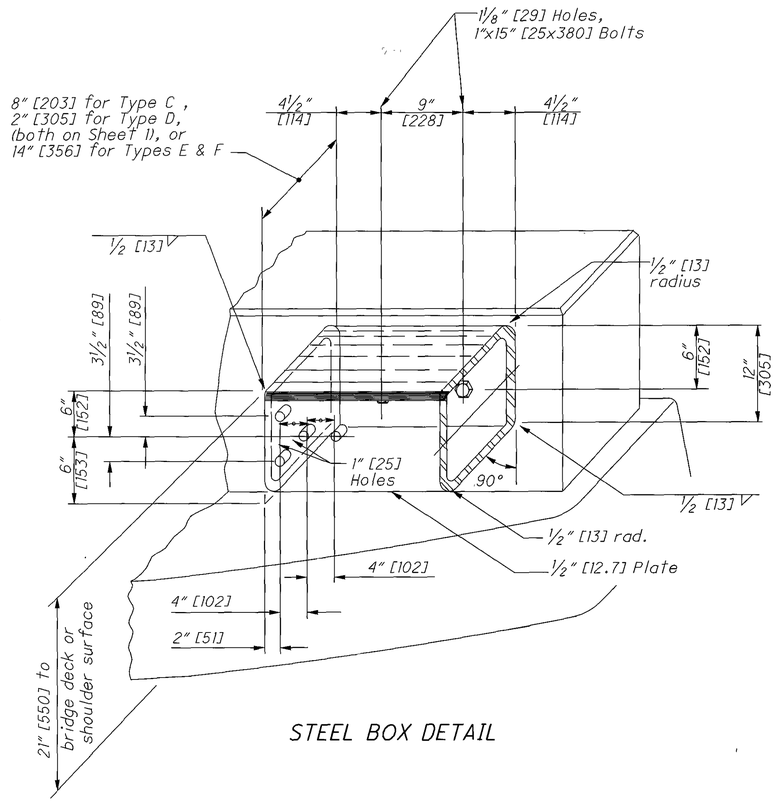
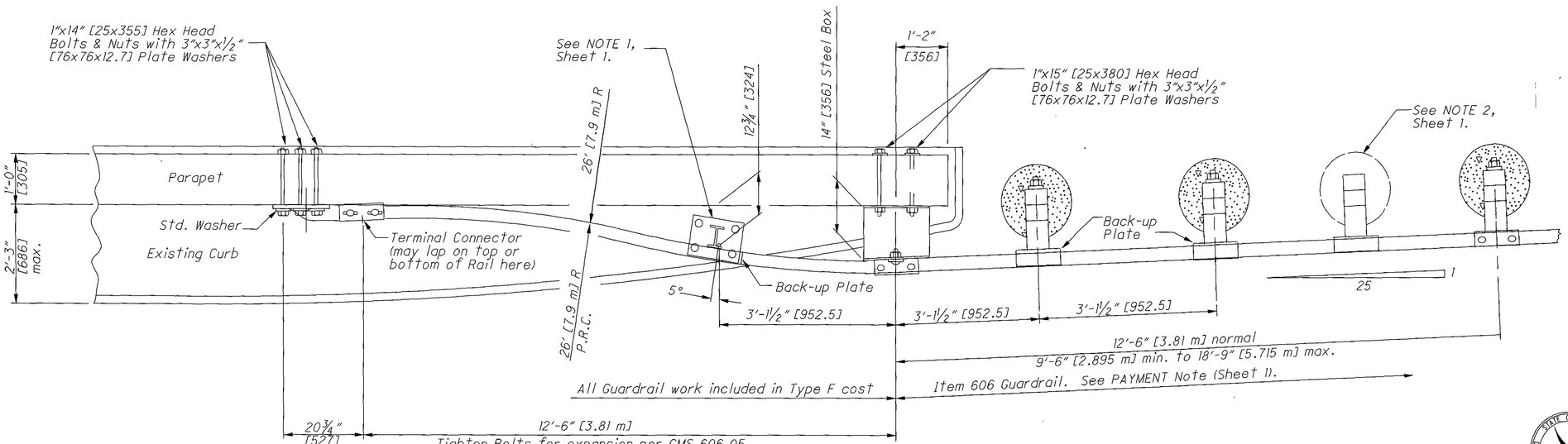


TYPE E



STEEL BOX DETAIL



TYPE F
(Two-Way Cross Road)

All metric dimensions (in brackets []) are in millimeters unless otherwise noted.

OFFICE OF ROADWAY ENGINEERING

DESIGNED | REVIEWED

REVISION DATE 10-20-06 | CHECKED

PLAN INSERT SHEET

BRIDGE TERMINAL ASSEMBLIES (Types C, D, E & F)

HAS-22-15.25

2 / 2

31 / 31

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