BLOOMFIELD-TARIFFVILLE MULTI-USE TRAIL CONNECTOR

EAST COAST GREENWAY STATE PROJECT NO. L128-0001
Bloomfield - Simsbury, Connecticut

CONNDOT STANDARD DRAWINGS (CONTINUED)
TR-1001.01 GENERAL CLAUSES (TEST PROCEDURES)
TR-1102.01 PEDESTRIAN PEDESTRIAN SIGNS
TR-1105.01 TRAFFIC SIGNALS AND CABLE ASSIGNMENTS
TR-1107.01 PEDESTRIAN PUSH BUTTON
TR-1111.01 LOOP VEHICLE DETECTORS AND SAWCUT
TR-1113.01 CONTROL CABLE
TR-1204.01 SIGN PLACEMENT AND RETROREFLECTIVE STRIP DETAILS
TR-1208.02 METAL SIGN POSTS AND SIGN MOUNTING DETAILS
TR-1210.04 PAVEMENT MARKING, LINES AND SYMBOLS
TR-1210.08 PAVEMENT MARKINGS ON NON-FREeways
TR-1220.01 SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS
TR-1220.02 CONSTRUCTION SIGN SUPPORTS AND CHANNELIZING DEVICES

ROUTE 189 ROADWAY, DRAINAGE SYSTEM, TRAFFIC SIGNALS AT THE INTERSECTION WITH ROUTE 315 (INT. #128-233), AND MAIN STREET (INT. #128-205) ARE MAINTAINED BY CTDOT. THE MULTI-USE TRAIL, CHAIN LINK FENCE, TRAIL SIGNS, GRASS BUFFER AND LANDSCAPING WILL BE MAINTAINED BY THE TOWNS OF BLOOMFIELD AND SIMSBURY.

NOVEMBER 2021
The legend on the right side of the page includes various symbols and abbreviations used in the plan. The plan itself shows a variety of features such as streets, sidewalks, utilities, and other elements typical of a civil engineering plan. The text on the page provides instructions and notes for the construction and maintenance of the project.

- **Legend**
  - [List of symbols and abbreviations]

- **Notes**
  - General notes: Instructions and guidelines for the construction and maintenance of the project.
  - Utility notes: Specific notes related to the installation and use of utilities.
  - Drainage notes: Instructions for managing and diverting water.

- **Construction Protection Measures**
  - Instructions for protecting the site during construction.

- **General Notes**
  - General guidelines for the project.

- **Construction Protection Measures**
  - Measures for protecting the site during construction.

- **Utility Notes**
  - Specific notes related to utilities.

- **Drainage Notes**
  - Instructions for managing and diverting water.

- **Construction**
  - Instructions for the construction process.

- **Protection**
  - Measures for protecting the site during construction.

- **Maintenance**
  - Instructions for maintaining the project.

- **Utility**
  - Specific notes related to utilities.

- **Drainage**
  - Instructions for managing and diverting water.

- **Construction**
  - Instructions for the construction process.

- **Protection**
  - Measures for protecting the site during construction.

- **Maintenance**
  - Instructions for maintaining the project.
**Erosion Mattings Installation Detail**

**1.** Secure the mattings in the trench by placing a row of staples over the edge of the mattings at 12-inch intervals. Secure the upper end of the lower strip as indicated in 'A' and 'B'. Overlap the ends of the top strip 4 inches and staple.

**2.** Place 4-inch or 6-inch wood stakes at a minimum distance of 3 feet from the protected area to hold the mattings in place. Secure the stakes with a row of staples 6 inches from the joint.

**3.** The use of 4-inch or 6-inch wood staples will hold the mattings in place. The staples should be driven every 12 inches to secure the mattings in the trench.

**4.** The use of 1-inch or 2-inch wood staples will hold the mattings in place. The staples should be driven every 12 inches to secure the mattings in the trench.

**5.** The use of 1-inch or 2-inch wood staples will hold the mattings in place. The staples should be driven every 12 inches to secure the mattings in the trench.

**6.** The use of 1-inch or 2-inch wood staples will hold the mattings in place. The staples should be driven every 12 inches to secure the mattings in the trench.

**.vol.

**Note:**

- 4-inch overlap of mat strips where two or more strip widths are required. Staples on 18-inch centers.
- Staples outside on 2-foot centers.
- Erosion control systems should be placed at each end of the trench and secured with a row of staples.

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**Typical Staples**

- No. 8 gauge wire
- 10 inches
- 6 inches
- 10 inches
MULTI-USE TRAIL CONNECTOR

Town of Bloomfield
Stanley D. Hawthorne, Town Manager

MULTI-USE TRAIL CONNECTOR

Town of Simsbury
Maria E. Capriola, Town Manager

LOCAL TRANSPORTATION CAPITAL IMPROVEMENT PROGRAM

Engineers
Scientists
Planners
Designers

MULTI-USE TRAIL CONNECTOR
LOCAL TRANSPORTATION CAPITAL IMPROVEMENT PROGRAM

Constructed in cooperation with the
State of Connecticut

Stanley D. Hawthorne
Town of Bloomfield

Maria E. Capriola, Town Manager

MULTI-USE TRAIL CONNECTOR
LOCAL TRANSPORTATION CAPITAL IMPROVEMENT PROGRAM

Jean Lehman, CT DOT

LOCAL TRANSPORTATION CAPITAL IMPROVEMENT PROGRAM

Engineers
Scientists
Planners
Designers

LOTCP PROJECT SIGN—SIMSBURY

LOTCP PROJECT SIGN—BLOOMFIELD
ENDWALL DIMENSIONS

<table>
<thead>
<tr>
<th>ENDWALL</th>
<th>START STA.</th>
<th>END STA.</th>
<th>D</th>
<th>S</th>
<th>H</th>
<th>L</th>
<th>BATTER (IN/FT)</th>
<th>B</th>
<th>VOL (CY)</th>
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<tbody>
<tr>
<td>ENDWALL 1</td>
<td>11+54.93</td>
<td>11+75.55</td>
<td>15&quot;</td>
<td>9'-8.5&quot;</td>
<td>8'-6.5&quot;</td>
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<td>3'-1.6&quot;</td>
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<td>18+08.04</td>
<td>18+26.25</td>
<td>15&quot;</td>
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<td>ENDWALL 3</td>
<td>26+41.04</td>
<td>26+58.80</td>
<td>2'-6&quot;</td>
<td>8'-2&quot;</td>
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<td>19'-0&quot;</td>
<td>0'-3&quot;</td>
<td>3'-1.3&quot;</td>
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<td>ENDWALL 4</td>
<td>29+91.37</td>
<td>30+13.09</td>
<td>2'-6&quot;</td>
<td>9'-9&quot;</td>
<td>9'-3.5&quot;</td>
<td>22'-0&quot;</td>
<td>0'-3&quot;</td>
<td>3'-3.8&quot;</td>
<td>16.3</td>
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</table>

RIPRAP
MATCH BOTTOM OF DITCH
MATCH BOTTOM OF DITCH

NOTES

ENGINEERS
SCIENTISTS
PLANNERS
DESIGNERS

18" DIA. CONCRETE FOOTING
CLASS "A," 3000 PS, FOOTING TO EXTEND 42" BELOW FINISH GRADE

NOTE
REFER TO SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION. LOCATIONS TO BE VERIFIED IN THE FIELD BY ENGINEER.
GENERAL NOTES:
1. SIDEWALK RAMP SHALL HAVE A GRADE BELOW TO THE SLOPE OF THE RAMP.
2. SIDEWALK RAMP SHALL BE SLOPED AT LEAST 1% MAX.
3. removal of existing sidewalk for new ramp installation shall be to the nearest existing pavement or curb cut.
4. the running slope of the curb ramp shall be less than 1% MAX.

SECTION AA

PERPENDICULAR SIDEWALK RAMP

CURBING

SLOPED CURBING INCLUDED WITH SIDEWALK CURB

2" WIDE DETECTABLE WARNING STRIP

RAMP LENGTH

LIP HEIGHT 1/4" MAX.

SIDEBAND CURBING (OPTIONAL)

CONCRETE CURBING (6" REAR)

DEPRESSED CURB INCLUDED WITH SIDEWALK RAMP

ROADWAY

MATCH ROADWAY PROFILE SLOPE

5% MIN. EMBEDMENT

RAMP WAREING DETAIL

1. TRANSITION SIDEWALK RAMP TO ROADWAY PROFILE AS GRADUALLY AS POSSIBLE.
2. TRANSITION SIDEWALK RAMP TO CURVE ROADWAY PROFILE.
3. COMPLETE TRANSITION TO ROADWAY PROFILE BEHIND DETECTABLE WARNING SURFACE.
INTERCONNECT TYPICAL CURB CROSSING

1. RESTORE AREAS DISTURBED BY TRENCH TO ORIGINAL CONDITION.
2. INSTALL PULL BOX A MINIMUM OF 12" (300 MM) FROM CURB UNLESS OTHERWISE BAYED ON PLANS OR DIRECTED BY ENGINEER.

CROSSING UNDER EXISTING UTILITY

1. WHEN ENCOUNTERED AT APPROXIMATELY THE SAME DEPTH, CROSS BEHIND.
2. PROTECT & SUPPORT EXPOSED EXISTING UTILITY.

DETECTABLE WARNING TAPE

1. TAPE COLORS - ORANGE BACKGROUND / BLACK LEGEND
2. POWER - RED BACKGROUND / BLACK LEGEND

PAVEMENT - BITUMINOUS CONCRETE OR OVERLAYERED PORTLAND CEMENT CONCRETE

1. TOTAL HOT MIX ASPHALT (HMA) THICKNESS TO MATCH EXISTING BITUMINOUS SURFACE OR PORTLAND CEMENT CONCRETE (PCC) THICKNESS.
2. WHEN ALLOWED BY ENGINEER, USE CONTROLLED LOW STRENGTH MATERIAL (CLSM) AS BENDING MATERIAL "TOP OF CURB" AT LEAST 50" (1250 MM) BEYOND SURFACES.

SIDEWALK

1. WHERE CONCRETE SIDEWALK DAMAGED OR CUT, REPLACE THE EXISTING SECTION BETWEEN POINTS REPLACEMENT SIDEWALK IS PAID FOR AT THE CONTRACT UNIT PRICE FOR "CONCRETE SIDEWALK."

NOTES:

1. PERMUT TRAFFIC CONTROL BEING PLANNED.
2. DRIVING MATERIAL "TOP OF CURB" BEYOND SURFACES.
3. REMOVE EXISTING GRADE AS REQUIRED FOR LATER USE.

EARTH

1. MAINTAIN EROSION CONTROL UNTIL EVIDENCE OF GOOD GROWTH.

NOTES:

1. WHERE CONCRETE SIDEWALK DAMAGED OR CUT, REPLACE THE EXISTING SECTION BETWEEN POINTS REPLACEMENT SIDEWALK IS PAID FOR AT THE CONTRACT UNIT PRICE FOR "CONCRETE SIDEWALK."

NOTES:

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1. TOTAL HOT MIX ASPHALT (HMA) THICKNESS TO MATCH EXISTING BITUMINOUS SURFACE OR PORTLAND CEMENT CONCRETE (PCC) THICKNESS.
2. WHEN ALLOWED BY ENGINEER, USE CONTROLLED LOW STRENGTH MATERIAL (CLSM) AS BENDING MATERIAL "TOP OF CURB" AT LEAST 50" (1250 MM) BEYOND SURFACES.
EXISTING PAVEMENT TO REMAIN (RESTRIPPING ONLY)

TO FARMINGTON RIVER

EXISTING CURB TO REMAIN

4" SINGLE WHITE LINE

4" DOUBLE YELLOW LINES

4" SINGLE WHITE LINE

MAINTAIN EXISTING 6" BCLC

6" PROCESSED AGGREGATE BASE

10' MULTI-USE TRAIL

1.5% & VARIES

GRASS SWALE

WITH EROSION CONTROL MATTING (TYPE D)

1' & VARIES

EXISTING ROADWAY WIDTH

10' & VARIES

8' IN PAVE TRAIL

1' IN PAVE TRAIL

6' IN PAVE TRAIL

SHOULDER

EXISTING GRADE

1.5% & VARIES

1'-2"

CUT BIT CONCRETE PAVEMENT

REMOVE EXISTING HMA, CURBING, AND EXISTING BASE MATERIAL

REPLACE WITH SUITABLE EXCAVATED MATERIAL AND 4" TOPSOIL

AND TURF ESTABLISHMENT (LOW GROW LAWN MIX) ON TOP

MATCH EXISTING 4" (MIN) TOPSOIL AND TURF ESTABLISHMENT (LOW GROW LAWN MIX) (TYP)

6" BIT CONCRETE CURBING

MAINTAIN EXISTING 1.5% & VARIES

1'-2"

CUT BIT CONCRETE PAVEMENT

EXISTING PAVEMENT TO REMAIN (RESTRIPPING ONLY)

EXISTING ROADWAY WIDTH

8' IN PAVE TRAIL

10' & VARIES

4' IN PAVE TRAIL

6' IN PAVE TRAIL

SHOULDER

EXISTING GRADE

1.5% & VARIES

1'-2"

CUT BIT CONCRETE PAVEMENT

REMOVE EXISTING HMA, CURBING, AND EXISTING BASE MATERIAL

REPLACE WITH SUITABLE EXCAVATED MATERIAL AND 4" TOPSOIL

AND TURF ESTABLISHMENT (LOW GROW LAWN MIX) ON TOP

MATCH EXISTING 4" (MIN) 2" CRUSHED STONE (TYP)

6" PROCESSED AGGREGATE BASE

2:1 MAX

3' & VARIES

2:1 MAX

3' & VARIES

EXISTING GRADE

1.5% & VARIES

1'-2"

CUT BIT CONCRETE PAVEMENT

REMOVE EXISTING HMA, CURBING, AND EXISTING BASE MATERIAL

REPLACE WITH SUITABLE EXCAVATED MATERIAL AND 4" TOPSOIL

AND TURF ESTABLISHMENT (LOW GROW LAWN MIX) ON TOP

MATCH EXISTING 4" (MIN) 2" CRUSHED STONE (TYP)

6" PROCSSED AGGREGATE BASE
STA. 43+64.89 TO 45+54.00

STA. 45+54.00 TO 48+16.52
STA. 48+81.79 TO 49+65.91
STA. 50+02.82 TO 50+30.59
MATCH EXISTING GRADE
INSTALL 4" MIN. TOPSOIL AND TURF ESTABLISHMENT (TYP)
INSTALL 6" BLT. CONC. CURBING (TYP)
MATCH EXISTING
SEE GRD PLANS

STA. 100+39.11 TO 101+37.92

MOUNTAIN ROAD
State Highway 189
Farmington River
200' UPLAND REVIEW AREA
VEGETATED BUFFER ZONE
Engineers
Scientists
Planners
Designers
Matchline A-A
See Sheet Ext-01
Matchline B-B
See Sheet Ext-03
State Highway 189
Farmington River
State Highway 189
Red Hill Road
Mountain Road
Elm Street (Route 315)

Engineers
Scientists
Planners
Designers

Matchline G-G
See Sheet Ext-07

Matchline H-H
See Sheet Ext-09
MULTI-USE TRAIL

STA. 4+45.16 BEGIN INSTALLATION OF BASE AND PAVEMENT COURSES MATCH EXISTING

N 06°13'55" W 27.88'
N 03°10'56" E 118.58'
N 37°37'22" E 20.30'

STA. 10+13.79, 4.63' RT INSTALL DMH REMOVE EXISTING PIPE INSTALL 19'-12" RCP @ 1.1% SLOPE

POB STA. 4+00.00
N 888296.56 E 997905.38

B L MULTI-USE TRAIL

4+00 5+00 6+00 7+00 8+00 9+00 10' 15'

CURVE 1 CURVE 2 CURVE 3 CURVE 4

APPROXIMATE BOTTOM OF SWALE LOCATION APPROXIMATE BOTTOM OF SWALE LOCATION

PROCESSED AGGREGATE
4" (MIN) 2" CRUSHED STONE

VEGETATED BUFFER ZONE 200' UPLAND REVIEW AREA

EXISTING (GRADING COMPLETED BY OTHERS) PROPOSED

TOPSOIL AND TURF ESTABLISHMENT

MULTI-USE TRAIL GRASS DRAINAGE SWALE MODIFIED RIP-RAP CUT BIT CONC PAVEMENT TRANSITION MILLING GRADE ADJUSTMENT REQUIRED SWALE FLOW ARROW ROADWAY WIDENING

BASELINE CURVE TABLE

<table>
<thead>
<tr>
<th>CURVE</th>
<th>RADIUS</th>
<th>LENGTH</th>
<th>TANGENT</th>
<th>DELTA</th>
<th>PI: NORTHING</th>
<th>PI: EASTING</th>
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</thead>
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<tr>
<td>CURVE 1</td>
<td>495.00</td>
<td>135.16</td>
<td>68.00</td>
<td>015° 38' 41&quot;</td>
<td>888391.87</td>
<td>997894.97</td>
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<td>CURVE 2</td>
<td>1105.00</td>
<td>120.16</td>
<td>60.14</td>
<td>006° 13' 49&quot;</td>
<td>888518.29</td>
<td>997915.93</td>
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<tr>
<td>CURVE 3</td>
<td>95.00</td>
<td>57.10</td>
<td>29.44</td>
<td>034° 26' 26&quot;</td>
<td>888726.13</td>
<td>997927.49</td>
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<tr>
<td>CURVE 4</td>
<td>120.00</td>
<td>181.87</td>
<td>113.55</td>
<td>086° 50' 05&quot;</td>
<td>888855.46</td>
<td>998027.17</td>
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</tbody>
</table>

PVI STA = 4+45.16 PVI ELEV = 184.92 A.D. = -5.88% K = 34.00 200.00' VC

PVC STA: 4+55 ELEV: 185.01

PVT STA: 6+55 ELEV: 180.91

PVI STA = 9+64.00 PVI ELEV = 165.49 A.D. = 7.12% K: 21.05 150.00' VC

PVC STA: 8+89 ELEV: 169.24

LOW PT ELEV = 166.61 LOW PT STA = 9+94.05
STATE HIGHWAY 189

N 889876.74
E 996913.02
PC = 24+94.55

N 889847.21
E 996921.14
PT = 24+63.93

N 889828.36
E 996927.35
PCC = 24+44.07

N 889884.81
E 996910.62
PRC = 25+02.97

MULTI-USE TRAIL
CONVERT CATCH BASIN
TO MANHOLE

STA. 26+49.92
INSTALL ENDWALL 3
INV.=177.1

STA. 26+79.23, 13.47' LT
END 4' POLYVINYL CHAIN LINK FENCE

CURVE 7

100' UPLAND REVIEW AREA OF FARMINGTON RIVER
TOTAL IMPACT = 85741 SF

STA. 26+24.81, 13.37' LT
BEGIN 4' POLYVINYL CHAIN LINK FENCE
200' UPLAND REVIEW
AREA OF FARMINGTON RIVER

LIMIT OF GRADING

CURVE 8
N 15°22'37" W
30.62'

CURVE 9

CURVE 10

STA. 26+93.01, 12.00' LT
BEGIN ROCKFALL BARRIER

STA. 27+99.25
END ROCKFALL BARRIER

INSTALL 6" BCLC

INSTALL LANDSCAPE PLANTINGS
(SEE MDS-02 FOR DETAILS) (TYP)

VEGETATED BUFFER ZONE
TOTAL IMPACT = 1531 SF

VEGETATED BUFFER ZONE
TOTAL IMPACT = 7327 SF

VEGETATED BUFFER ZONE
TOTAL IMPACT = 10992 SF

VEGETATED BUFFER ZONE

PVI STA = 25+13.00
PVI ELEV = 183.73

PVI STA = 27+25.00
PVI ELEV = 182.56

-0.55%
-0.43%

184.2
184.36
184.0
184.25
183.8
184.13
183.7
183.91
183.7
183.79
183.6
183.67
183.5
183.53
183.4
183.39
183.2
183.25
183.1
183.11
182.9
182.97
182.8
182.84
182.6
182.70
182.4
182.56
182.3
182.45
182.2
182.34
182.1
182.24
182.0
182.13
181.9
182.02

EXISTING
PROPOSED

23+75
24+00
24+50
25+00
25+50
26+00
26+50
27+00
27+50
28+00
28+50

ROADWAY WIDENING
TRANSITION MILLING
GRADE ADJUSTMENT REQUIRED
SWALE FLOW ARROW
CUT IN CONCRETE PAVEMENT
SWALE FLOW ARROW

MATCHLINE MULTI-USE TRAIL

MATCHLINE MULTI-USE TRAIL

STATION
23+75.00
28+50.00
PROFILE - MULTI-USE TRAIL
<table>
<thead>
<tr>
<th>SIGN</th>
<th>MUTCD DESIGNATION</th>
<th>CT DOT DESIGNATION</th>
<th>SIZE</th>
<th>SHEETING TYPE</th>
<th>MAINTAINED BY</th>
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<tr>
<td>R3-B</td>
<td>31-0222</td>
<td>CT DOT</td>
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<td>REVERSE FACING - SHEET ALUMINUM (TYPE I RETROREFLECTIVE SHEETING)</td>
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<tr>
<td>R5-3</td>
<td>31-7227</td>
<td>CT DOT</td>
<td>24&quot; x 24&quot;</td>
<td>REVERSE FACING - SHEET ALUMINUM (TYPE I RETROREFLECTIVE SHEETING)</td>
<td>CT DOT</td>
</tr>
</tbody>
</table>
MULTI-USE TRAIL

BEGIN TAPER
BEGIN 4" SINGLE WHITE LINE
MATCH EXISTING

STA. 12+03, LT 250.00'

BEGIN TAPER
BEGIN 4" DOUBLE YELLOW LINE
MATCH EXISTING

STA. 10+48.12, 14.01' RT

4" SINGLE WHITE LINE
R 130'
END TAPER
PT STA. 10+60.81, 14.00' RT

4" SINGLE WHITE LINE
PC STA. 10+51.43, 25.03' RT

4" DOUBLE YELLOW LINE
END TAPER
PT STA. 10+59.48, 36.01' RT

4" SINGLE WHITE LINE
PC STA. 10+52.91, 36.08' RT

MATCH EXISTING MULTI-USE TRAIL

INSTALL 4" SINGLE WHITE LINE
INSTALL 4" DOUBLE YELLOW LINE

INSTALL BLOOMFIELD LOTCIP PROJECT SIGN (SEE MDS-02)

STA. 10+19, RT

INSTALL 4" DOUBLE YELLOW LINE
INSTALL 4" SINGLE WHITE LINE
State Highway 189

MULTI-USE TRAIL

INSTALL 4" SINGLE WHITE LINE

INSTALL 4" DOUBLE YELLOW LINE

PC = 22+21.15

PT = 24+63.93

PCC = 24+44.07

PRC = 25+02.97

MULTI-USE TRAIL

Engineers  Scientists  Planners  Designers

BROOMFIELD--TARRIFVILLE
MULTI-USE TRAIL CONNECTOR

SIGN & EASEMENT
MARKING PLAN
State Highway 189

PC = 41+01.35
PT = 40+50.56

MULTI-USE TRAIL

INSTALL 4" SINGLE WHITE LINE

STA. 39+45.01, 24.14' RT
BEGIN 4" DASHED SINGLE WHITE LINE (2' LINE, 4' SPACE)
BEGIN TAPER
PC STA. 40+92.52, 20.00' RT
4" DOUBLE YELLOW LINE
PT STA. 40+41.05, 43.04' RT
4" SINGLE WHITE LINE

STA. 39+88.04, 41.69' RT
PCC 4" SINGLE WHITE LINE
R500'
STA. 40+92.52, 43.00' RT
4" SINGLE WHITE LINE

INSTALL
STA. 40+26.73, 32.00' RT
END 4" DASHED SINGLE WHITE LINE (2' LINE, 4' SPACE)
BEGIN 4" SINGLE WHITE LINE
STA. 40+29, RT

Engineers
Scientists
Planners
Designers

Matchline Multi-Use Trail
Sta 41+75.00

Matchline Multi-Use Trail
Sta 38+00.00
TOWN OF SIMSBURY TO MAINTAIN "DO NOT BLOCK THE BOX" PAVEMENT MARKINGS ON ROUTE 315.

NOTES

H  INSTALL 31-0290 (        )
F  INSTALL 31-0290 (         ) AND
D  INSTALL 41-0317 AND 41-0436 (SIG. AH. - 750')
A  INSTALL 31-0802 (STOP HERE ON RED)
SIGN LEGEND

- PEDESTRIAN ACCESSIBLE
- PEDESTRIAN PUSH BUTTON & SIGN

TECHNICAL NOTES

SIZE (WXL)

14'X6'
20'X6'
6'X6'

ALL INDICATIONS HAVE LED LAMPS
FACE 8 HAS TUNNEL VISORS

FUNCTION

Y
PRESENCE

DEPENDENT TOLLING ONLY DURING WALK INTERVAL.

PEDESTRIAN SIGNAL FACE

EXISTING WOOD SPAN POLE

EXISTING PUSH BUTTONS, SIGNS, AND ASSOCIATED WIRING FROM

REMOVE EXISTING SIGNAL HEAD FACING EAST SIDE OF ROUTE 189 AND

RELOCATE EXISTING SIGNAL HEADS 3, 4, & 5 AS SHOWN ON THE PLAN.

PROVISION, 1.07 LEGAL RELATIONS AND RESPONSIBILITIES.

COORDINATE WITH UTILITY COMPANY REPRESENTATIVES LISTED IN THE SPECIAL

CABLES.

CONNECT NEW LOOP DETECTORS TO EXISTING CONTROLLER WITH NEW 14/2

ON THE PLAN AND 8' APART UNLESS OTHERWISE SPECIFIED.

MODIFY EXISTING CONTROLLER TO ACCOMMODATE CHANGES. SUPPLY 5 COPIES

MODIFY CONTROLLER FOUNDATION TO ACCEPT NEW CONDUIT.

ALUMINUM PEDESTAL, COUNTDOWN PEDESTRIAN SIGNAL, APS PUSHBUTTON

SIDEWALK RAMP TO BE CONSTRUCTED PER PLAN SHEET PLN-09.

ON THE PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE

ENGINEERING.

UNAVAILABLE NOTIFY THE ENGINEER AND CONTACT THE DIVISION OF TRAFFIC

SIDEWALKS SHALL BE VERIFIED PRIOR TO INSTALLATION TO PROVIDE A FREE

STAKE R.O.W PRIOR TO EXCAVATION.

REMOVE ALL ABANDONED TRAFFIC SIGNAL EQUIPMENT PER SPECIAL

ALL TRAFFIC SIGNAL EQUIPMENT IS EXISTING EXCEPT AS NOTED.

* STANDARD INSTALLATION AND GUIDE DETAIL SHEETS.

FOLLOW CURRENT D.O.T. DOCUMENTS WHICH CAN BE ACCESSED ON THE D.O.T.
**NOTES:**

- Site to maintain pavement markings on Route 189 and Town to maintain all other pavement markings on Main Street.
- Stop bars on the Main St. approach to Route 189.

**BAR TYPE:**
- CROSSWALK - TOWN MAINTAINED
- CROSSWALK - STATE MAINTAINED

**REFERENCES:**
- 8000 mm, B.C. 510 mm, LOAD AT YIELD 27,150 NEWTONS

**APPENDIX:**
- MAX INIT
- MIN GAP
- ADD INIT
- RED
- YELLOW
- GREEN
- TBR
- PED CLR
- TTR
- VEH EXT
- DON'T WALK
- WALK/PED. CLR
- GREEN ARROW
- RED ARROW

**EXISTING VS. PROPOSED:**
- Existing utility pole
- Proposed utility pole
- Existing steel span pole
- Proposed steel span pole
- Existing wood span pole
- Proposed wood span pole

**EXISTING VS. PROPOSED:**
- Existing rigid metal conduit
- Proposed rigid metal conduit
- Existing controller
- Proposed controller
- Existing handhole
- Proposed handhole

**ZONES:**
- Video detection zone
- Auxiliary equipment cabinet
- Auxiliary termination cabinet
- Existing utility pole
- Proposed utility pole
- Existing steel span pole
- Proposed steel span pole
- Existing wood span pole
- Proposed wood span pole

**AUDIO DETECTORS:**
- OPTICAL DETECTOR
- MAGNETIC DETECTOR
- SYSTEM DETECTOR
- LOOP DETECTOR
- EXISTING CONTROLLER
- PROPOSED CONTROLLER

**STATE AND DIRECTIONAL ARROWS:**

**CONTACTS:**
- W. R. R.
- P.O. Box 49
- Route 189 (Hartford Avenue)
- Town of Simsbury, Connecticut 06070
- 100 Great Meadow Road, Suite 200
- Wethersfield, Connecticut 06109

**TECHNICAL NOTES:**
- All indications are LED face 2 have tunnel visors.

**APPENDICES:**
- TIR # N/A
- OFFICE RECORD

**APPROVED:**
- APPROVED DATE
- APPROVED BY
- SUBMITTED BY
- CHECKED BY
- DRAWN BY

**DRAWING TITLE:**
- INTERSECTION # 128-205
- REV
- UNMETERED SERVICE
- SERVICE POLE 1409

**PROJECT:**
- TOWN OF SIMSBURY
- TRAFFIC CONTROL
- TRAFFIC DESIGN
- ELECTRICAL DESIGN
MULTI-USE TRAIL

REMOVE EXISTING PAVEMENT MARKINGS

INSTALL DRUMS @ 80' SPACING

WORK AREA

NOTES:
1. ALL SIGN LOCATIONS INDICATED ON THE PLAN ARE APPROXIMATE AND SHOULD BE DETERMINED IN FIELD AS DIRECTED BY THE ENGINEER.
2. SEE SPECIAL PROVISION "ITEM #0971001A-MAINTENANCE AND PROTECTION OF TRAFFIC", CONSTRUCTION TRAFFIC CONTROL PLAN FOR SIDES AND WORK LANE
3. ACTUAL LENGTH OF WORK AREA IS VARIABLE
4. ALL POST MOUNTED CONSTRUCTION SIGNS TO HAVE BARRICADE WARNING LIGHTS (HIGH INTENSITY) MOUNTED ON THE TOP EDGE OF SIGN

SUGGESTED PHASE 1 CONSTRUCTION SEQUENCE:
1. REMOVE EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH TEMPORARY LANE SHIFT
2. INSTALL SIGNS, TEMPORARY PAVEMENT MARKINGS, CONES OR DRUMS WHERE REQUIRED
3. INSTALL WIDENING AND STORMWATER RUNOFF CONTROL MEASURES
4. PERFORM ROADWAY WIDENING
5. PERFORM嚇 AND WORKING
6. INSTALL HOE EROSION CONTROL MEASURES ON CURB
7. REMOVE NURSERY FILL
8. PLACE TOPSOIL AND TURF ESTABLISHMENT
9. REINSTALL TEMPORARY TRAFFIC CONTROL MEASURES
Phase 1

Suggested Phase 1 Construction Sequence:
1. Remove existing pavement markings that conflict with temporary lane shift.
2. Install signs, temporary pavement markings, cones or drums where required.
3. Install erosion and sedimentation control measures.
4. Perform roadway widening.
5. Perform rail and railroads.
6. Perform bituminous concrete curing.
7. Paint metal rail.
8. Place topsoil and turf establishment.
9. Perform temporary traffic control measures.

Matchline Multi-Use Trail
Sta 28+50.00

Matchline Multi-Use Trail
Sta 33+50.00

Matchline Multi-Use Trail
Sta 38+00.00

State Highway 189

State Highway 189

NOTES:
1. All sign locations indicated on the plans are approximate. Exact locations shall be determined in field as directed by the engineer.
2. See special provision for temporary pavement markings and protection of state highway structures.
3. Actual length of work area is variable.
4. All posted temporary construction signs to include the word TCA.

Matchline Multi-Use Trail
30+15.00
30+50.00
30+85.00
30+120.00
30+155.00
30+200.00
30+245.00
30+290.00
30+335.00
30+380.00
30+425.00
30+470.00
30+515.00
30+560.00
30+605.00
30+650.00
30+695.00
30+740.00
30+785.00
30+830.00
30+875.00
30+920.00
31+00.00

Suggested Phase 1 Construction Sequence:
1. Remove existing pavement markings that conflict with temporary lane shift.
2. Install signs, temporary pavement markings, cones or drums where required.
3. Install erosion and sedimentation control measures.
4. Perform roadway widening.
5. Perform rail and railroads.
6. Perform bituminous concrete curing.
7. Paint metal rail.
8. Place topsoil and turf establishment.
9. Perform temporary traffic control measures.

Matchline Multi-Use Trail
Sta 28+50.00

Matchline Multi-Use Trail
Sta 33+50.00

Matchline Multi-Use Trail
Sta 38+00.00

State Highway 189

State Highway 189

NOTES:
1. All sign locations indicated on the plans are approximate. Exact locations shall be determined in field as directed by the engineer.
2. See special provision for temporary pavement markings and protection of state highway structures.
3. Actual length of work area is variable.
4. All posted temporary construction signs to include the word TCA.
LANGUAGE: English

STATE HIGHWAY 189

MATCHLINE MULTI-USE TRAIL

MATCHLINE MULTI-USE TRAIL

STATE HIGHWAY 189

STATE HIGHWAY 189

RED HILL ROAD

RANGE STREET (ROUTE 315)

REMOVE EXISTING PAVEMENT

MARKINGS

INSTALL TEMPORARY PLASTIC

PAVEMENT MARKING - 4" DOUBLE

YELLOW

INSTALL DRUMS @ 80' SPACING

NOTES:

1. ALL SIGN LOCATIONS INDICATED ON THE PLAN ARE APPROXIMATE. EXACT LOCATIONS SHALL BE DETERMINED IN FIELD AS DIRECTED BY THE ENGINEER.

2. SEE SPECIAL PROVISION "ITEM #0971001A-MAINTENANCE AND PROTECTION OF TRAFFIC", CONSTRUCTION TRAFFIC CONTROL PLAN 15 FOR SIGN AND DRUM LAYOUT.

3. ACTUAL LENGTH OF WORK AREA IS VARIABLE.

4. ALL POST MOUNTED CONSTRUCTION SIGNS TO HAVE BARRICADE WARNING LIGHTS (HIGH INTENSITY) MOUNTED ON THE TOP EDGE OF SIGN.

5. SUGGESTED PHASE 1 CONSTRUCTION SEQUENCE:

1. REMOVE EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH TEMPORARY LANE SHIFT.

2. INSTALL SIGNS, TEMPORARY PAVEMENT MARKINGS, CONES OR DRUMS WHERE REQUIRED.

3. INSTALL EROSION AND SEDIMENTATION CONTROL MEASURES.

4. PERFORM ROADWAY WIDENING.

5. PERFORM MILL AND WIDENING.

6. INSTALL BITUMINOUS CONCRETE LIP CURING.

7. RESET METAL BEAM RAIL.

8. PLACE TOPSOIL AND TURF ESTABLISHMENT.

9. REMOVE TEMPORARY TRAFFIC CONTROL MEASURES.

10. PLACE STANDARD PAVEMENT MARKINGS OR临时 lane shift.
STATE HIGHWAY 189

MULTI-USE TRAIL

INSTALL TEMPORARY PLASTIC PAVEMENT MARKING TAPE - 4" DOUBLE YELLOW

REMOVE EXISTING PAVEMENT MARKINGS

INSTALL DRUMS @ 50' SPACING

INSTALL HAYBALE BARRIER

WORK AREA

NOTES:

1. ALL SIGN LOCATIONS INDICATED ON THE PLAN ARE APPROXIMATE. EXACT LOCATIONS SHALL BE DETERMINED IN FIELD AS DIRECTED BY THE ENGINEER

2. SEE SPECIAL PROVISION "ITEM #0971001A-MAINTENANCE AND PROTECTION OF TRAFFIC", CONSTRUCTION TRAFFIC CONTROL PLAN 15 FOR SIGN AND DRUM LAYOUT

3. ACTUAL LENGTH OF WORK AREA IS VARIABLE

4. ALL POST MOUNTED CONSTRUCTION SIGNS TO HAVE BARRICADE WARNING LIGHTS (HIGH INTENSITY) MOUNTED ON THE TOP EDGE OF SIGN

SUGGESTED PHASE 2 CONSTRUCTION SEQUENCE:

1. REMOVE EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH TEMPORARY LANE SHIFT

2. INSTALL SIGNS, TEMPORARY PAVEMENT MARKINGS, CONES OR DRUMS WHERE REQUIRED

3. INSTALL EROSION AND SEDIMENTATION CONTROL MEASURES

4. PERFORM CLEARING AND GRUBBING WITHIN WORK AREA

5. SAW CUT EXISTING ROADWAY

6. REMOVE EXISTING PAVEMENT

7. INSTALL DRAINAGE STRUCTURES AND PIPES AND PERFORM DRAINAGE MODIFICATIONS

8. PERFORM FULL DEPTH EXCAVATION INCLUDING FORMING SWALE

9. FORM SUBGRADE, PLACE PROCESSED AGGREGATE BASE AND HOT MIX ASPHALT LIFTS

10. INSTALL BITUMINOUS CONCRETE LIP CURBING

11. INSTALL ROCKFALL BARRIER, CHAIN LINK FENCE, EMBANKMENT WALL, BIKE RACKS, AND SIGNS

12. COMPLETE SIGNAL MODIFICATIONS

13. PLACE TOPSOIL AND TURF ESTABLISHMENT INCLUDING EROSION MATTING AND LANDSCAPING

14. REMOVE TEMPORARY TRAFFIC CONTROL MEASURES AND INSTALL PERMANENT PAVEMENT MARKINGS

15. PLACE TOPSOIL AND TURF ESTABLISHMENT INCLUDING EROSION MATTING AND LANDSCAPING

16. REMOVE EXISTING PAVEMENT MARKINGS AND INSTALL PERMANENT PAVEMENT MARKINGS

PHASE II

BLOOMFIELD-TARPATTA MULTIPLE USE TRAIL CONDUCTOR

Engineers: VHB

Scientists: VHB

Planners: VHB

Designers: VHB

DATE: 11/17/2021

PAGE: 1

SHEET: 34 OF 80
**State Highway 189**

**Sta 28+50.00**

**Matchline Multi-Use Trail**

1. All locations indicated on the plan and specified on sheet sections shall be determined in field as directed by the engineer.
3. Actual width of work area is variable.
4. All post-mounted construction signs to have barricade warning lights (high intensity) mounted on the top edge of the sign.

**Suggested Phase 2 Construction Sequence:**

1. Finish existing pavement markings that conflict with temporary lane shift.
2. Install post-mounted construction signs. Bases ofFLAIADW ADADS LWO NADW.
3. Install erosion and sedimentation control measures.
4. Perform clearing and grubbing within work area.
5. Saw cut existing sidewalks.
6. Finish existing pavement.
7. Install drainage structures and pipes and perform drainage modifications.
8. Perform full depth excavation and regrading.
9. Form subgrade. Place processed aggregates base and hot mix asphalt.
10. Install asphalt concrete (thick mix/shoulder, embankment roll, and faced and seeded).
11. Complete signal modifications.
12. Place topsoil and turf establishment including erosion fighting and landscaping.
13. Finale temporary traffic controls, medians, and install permanent pavement markings.

**Work Areas**

**Notes:**
1. All sign locations indicated on the plan and specified on sheet sections shall be determined in field as directed by the engineer.
3. Actual width of work area is variable.
4. All post-mounted construction signs to have barricade warning lights (high intensity) mounted on the top edge of the sign.

**Matchline Multi-Use Trail**

**Sta 33+50.00**

**State Highway 189**

**Matchline Multi-Use Trail**

**Sta 38+00.00**
Suggested Phase 2 Construction Requirements:

1. Remove existing pavement markings that conflict with temporary lane shifts.
2. Install signs, temporary pavement markings, cones or drums where required.
3. Install dividers and demarcation control guidelines.
4. Perform leveling and grading within work area.
5. Saw cut existing roadway.
6. Finishing existing pavement.
7. Install drain structures and pipes and perform drainage modifications.
8. Perform full depth excavation including grading drains.
9. Form subgrade, place processed aggregate base and hot mix asphalt lifts.
10. Install permanent concrete or grading.
11. Install rockfall barrier, chain link fence, embankment wall, rail, guard and signs.
12. Complete signal modifications.
13. Place final and turf establishment including erosion control and landscaping.
14. Perform temporary traffic control measures and install permanent pavement markings.
NOTES:

1. All sign locations indicated on the plan are approximate and locations shall be determined in field as directed by the engineer.

2. See special provisions item #0971001A, maintenance and protection of traffic, construction traffic control plan 15 for sign and drum layout.

3. Actual length of work area is variable.

4. All post mounted construction signs to have barricade warning lights (high intensity) mounted on the top edge of sign.

SUGGESTED PHASE 2 CONSTRUCTION SEQUENCE:

1. Remove existing pavement markings that conflict with temporary lane shift.
2. Install signs, temporary pavement markings, cones or drums where required.
3. Install erosion and sedimentation control measures.
4. Perform clearing and grubbing within work area.
5. Saw cut existing pavement.
6. Remove existing pavement.
7. Install drainage structures and pipes and perform drainage modifications.
8. Perform full depth excavation including forming walls.
9. Form subgrade, place processed aggregate base and hot mix asphalt lifts.
10. Install bituminous concrete lip curb.
11. Install rockfall barrier, chain link fence, embankment wall, bike racks, and signs.
12. Complete signal modifications.
13. Place topsoil and turf establishment including erosion control and landscaping.
NOTES:

1. ALL SIGN LOCATIONS INDICATED ON THE PLAN ARE APPROXIMATE. EXACT LOCATIONS SHALL BE DETERMINED IN FIELD AS DIRECTED BY THE ENGINEER.

2. ACTUAL LENGTH OF WORK AREA IS VARIABLE.

3. ALL POST MOUNTED CONSTRUCTION SIGNS TO HAVE BARRICADE WARNING LIGHTS (HIGH INTENSITY) MOUNTED ON THE TOP EDGE OF SIGN.

SUGGESTED PHASE 3 CONSTRUCTION SEQUENCE:
1. INSTALL CONES AND CONSTRUCTION SIGNS WHERE REQUIRED.
2. INSTALL BARRIERS AND SEGREGATION CONTROL MEASURES.
3. PERFORM CLEARING AND GRUBBING WITHIN WORK AREA.
4. PERFORM DRAINAGE MODIFICATIONS.
5. PERFORM FULL DEPTH PAVEMENT CONSTRUCTION.
6. PLACE TOPSOIL AND TURF ESTABLISHMENT.

SUGGESTED PHASE 4 CONSTRUCTION SEQUENCE:
1. INSTALL EROSION AND SEDIMENTATION CONTROL MEASURES.
2. PERFORM CLEARING AND GRUBBING WITHIN WORK AREA.
3. SAW CUT EXISTING ROADWAY AND REMOVE EXISTING PAVEMENT.
4. PERFORM DRAINAGE MODIFICATIONS.
5. INSTALL SIGNS AND PERMANENT PAVEMENT MARKINGS.
6. PLACE TOPSOIL AND TURF ESTABLISHMENT.
Engineers
Scientists
Planners
Designers
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<th>SHEET NO.</th>
<th>TITLE</th>
<th>APPROVAL DATE**</th>
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<td>ANTI-TRACKING PAD</td>
<td>11-06-21</td>
<td>HW-821.01a</td>
<td>TRANSITION - 45° (1145) F-SHAPE TO 45° (1145) VERTICAL SHAPE SHEET 1</td>
<td>1-26-12</td>
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<td>HW-286.01</td>
<td>DRAINAGE TRENCH EXCAVATION</td>
<td>7-15-20</td>
<td>HW-821.01l</td>
<td>TRANSITION - 45° (1145) F-SHAPE TO 45° (1145) VERTICAL SHAPE SHEET 2</td>
<td>10-18-10</td>
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<td>ENDWALLS</td>
<td>11-06-21</td>
<td>HW-821.01i</td>
<td>TRANSITION - 45° (1145) F-SHAPE TO 45° (1145) VERTICAL SHAPE SHEET 3</td>
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<td>STEEL REINFORCEMENT FOR ENDWALLS</td>
<td>11-09-21</td>
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<td>45° F-SHAPE PRECAST CONCRETE BARRIER CURB SHEET 1</td>
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<td>HW-506.02</td>
<td>TYPE &quot;D-G&quot; &amp; &quot;L&quot; ENDWALLS</td>
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<td>ENDWALLS FOR PIPE - ARCH</td>
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<td>HW-821.03a</td>
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<td>CATCH BASIN AND DROP INLET TYPES &quot;C&quot; AND &quot;C-L&quot;</td>
<td>7-15-20</td>
<td>HW-821.03b</td>
<td>TRANSITION - 32° (813) JERSEY SHAPE TO 45° (1145) VERTICAL SHAPE SHEET 2</td>
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<td>CATCH BASIN TOPS (TYPES &quot;C&quot; AND &quot;C-L&quot;) FOR DOUBLE GRADE TYPE I</td>
<td>7-15-20</td>
<td>HW-821.03c</td>
<td>TRANSITION - 32° (813) JERSEY SHAPE TO 45° (1145) VERTICAL SHAPE SHEET 3</td>
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<td>HW-856.03</td>
<td>CATCH BASIN TOPS (TYPES &quot;C&quot; AND &quot;C-L&quot;) FOR DOUBLE GRADE TYPE II</td>
<td>7-15-20</td>
<td>HW-821.03d</td>
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<td>PRECAST CATCH BASIN AND ROUND STRUCTURE</td>
<td>7-15-20</td>
<td>HW-821.03e</td>
<td>TRANSITION - 32° (813) JERSEY SHAPE TO 45° (1145) F-SHAPE</td>
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<td>7-15-20</td>
<td>HW-821.04a</td>
<td>MERKITT PARKWAY NARROW MEDIAN BARRIER</td>
<td>6-09-11</td>
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<td>HW-856.06</td>
<td>PRECAST CATCH BASIN TYPES FOR DOUBLE GRADE TYPE II</td>
<td>7-15-20</td>
<td>HW-821.04b</td>
<td>MERKITT PARKWAY - 2' (610) WIDE MEDIAN BARRIER AND ROADSIDE BARRIER</td>
<td>7-24-13</td>
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<td>HW-858.07b</td>
<td>CATCH BASIN TYPE &quot;C&quot; AND &quot;C-L&quot; DOUBLE GRADE TYPE I TOPS</td>
<td>11-09-21</td>
<td>HW-821.05b</td>
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<td>11-09-21</td>
<td>HW-821.06</td>
<td>54° (1372) VERTICAL SHAPE BARRIER</td>
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<td>CATCH BASIN TYPE &quot;C-G&quot; AND &quot;C-L&quot; BARRIER CURB TOPS</td>
<td>11-09-21</td>
<td>HW-821.07</td>
<td>MISCELLANEOUS DETAILS FOR BARRIER TRANSITIONS</td>
<td>7-12-12</td>
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<td>HW-856.08</td>
<td>CATCH BASIN FRAMES AND GRATES</td>
<td>7-15-20</td>
<td>HW-821.08a</td>
<td>F-SHAPE CONC. BARRIER CURB (21&quot;x45&quot;) TRANSITION FOR THRU-BEAM</td>
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GENERAL NOTE:
1. Precast concrete curbing may be cast by the manufacturer with optional lifting and doweled bar holes.

CONCRETE CURBING (8" REVEAL)

CONCRETE PARK CURBING (4" REVEAL)

FRONT ELEVATION

FRONT ELEVATION

SECTION

SECTION
BITUMINOUS CONCRETE LIP CURBING (6" HIGH)

BITUMINOUS CONCRETE PARK CURBING (4" HIGH)

BITUMINOUS CONCRETE BERM CURBING (4" HIGH)

SECTION

RIDING SURFACE

TACK COAT COMPLETE WIDTH OF CURB

BACKFILL

R = 2 1/4"

SECTION

RIDING SURFACE

TACK COAT COMPLETE WIDTH OF CURB

BACKFILL

R = 2 1/4"

SECTION

RIDING SURFACE

TACK COAT COMPLETE WIDTH OF CURB

BACKFILL

R = 1 1/4"

MATCH TOP COURSE
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**DOCUMENT ALL LOOP DETECTOR VALUES BOTH CALCULATED AND MEASURED.**

**DEFINITIONS:**
- LOOP: A ring or wire in a conducting medium or a medium through which a current flows.
- LOOP PARTITION: A physical separation of a loop into segments.
- LOOP RESISTANCE: The resistance of the loop, including its connections and terminations.
- LOOP LOOP INDUCTANCE: The inductance associated with the loop itself.

**1. LOOP RESISTANCE:**
- **LOOP INDUCTANCE TEST:**
  - **TEST PROCEDURE:**
    - INSERT ELECTRODE (A) DISTANCE (D) FROM THE FOUNDATION, ALLOWING A MINIMUM OF 250 ELECTRODE INCHES (600MM) BETWEEN ELECTRODE (A) AND ELECTRODE (B) OR (C).
    - INSERT ELECTRODE (B) AT THE CENTER OF THE LOOP INDUCTANCE (L). ANNEXE IN A STRAIGHT LINE TO ELECTRODE (C).
    - ELECTRODE (B) PLACED AT THE END OF THE LOOP INDUCTANCE (L). ANNEXE IN A STRAIGHT LINE TO ELECTRODE (A).
    - USE FORMULA (A) TO CALCULATE.
    - USE FORMULA (B) TO CALCULATE.
    - USE FORMULA (C) TO CALCULATE.
  - **NOTE:**
    - ALL TESTS SHOULD BE DONE AT THE CONTROLLED FREQUENCY (500 Hertz).
    - USE A MICROSECOND PENETRATOR TO MEASURE THE PENETRATION RESISTANCE.
    - USE A MEASURING INSTRUMENT TO MEASURE THE PENETRATION RESISTANCE.

**2. LOOP INDUCTANCE TEST DATA (EXAMPLE):**

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<th>LOCATION</th>
<th>RESISTANCE (O)</th>
<th>INDUCTANCE MICROHENRIES (H)</th>
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<td>1</td>
<td>SITE 1</td>
<td>500</td>
<td>5000</td>
</tr>
<tr>
<td>2</td>
<td>SITE 2</td>
<td>600</td>
<td>6000</td>
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**3. POINT GROUND RESISTANCE TEST CIRCUIT:**

- **TEST PROCEDURE:**
  - INSERT ELECTRODE (A) DISTANCE (D) FROM THE FOUNDATION.
  - INSERT ELECTRODE (B) DISTANCE (D) FROM THE FOUNDATION.
  - INSERT ELECTRODE (C) DISTANCE (D) FROM THE FOUNDATION.
  - INSERT ELECTRODE (D) DISTANCE (D) FROM THE FOUNDATION.
  - INSERT ELECTRODE (E) DISTANCE (D) FROM THE FOUNDATION.
  - INSERT ELECTRODE (F) DISTANCE (D) FROM THE FOUNDATION.
  - INSERT ELECTRODE (G) DISTANCE (D) FROM THE FOUNDATION.
  - INSERT ELECTRODE (H) DISTANCE (D) FROM THE FOUNDATION.
  - INSERT ELECTRODE (I) DISTANCE (D) FROM THE FOUNDATION.
  - INSERT ELECTRODE (J) DISTANCE (D) FROM THE FOUNDATION.

**GROUND RESISTANCE CHART (EXAMPLE):**

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<th>RESISTANCE (O)</th>
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<tr>
<td>20</td>
<td>100</td>
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<td>30</td>
<td>150</td>
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<tr>
<td>40</td>
<td>200</td>
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**INDUCTIVE LOOP TEST PROCEDURE:**

- **COLOR FUNCTION:**
  - A: WHITE – 10 VAC Voltmeter
  - B: BROWN – 10 VAC Voltmeter
  - C: BLACK – 10 VAC Voltmeter
  - D: RED – 10 VAC Voltmeter
  - E: GREEN – 10 VAC Voltmeter
  - F: YELLOW – 10 VAC Voltmeter
  - G: BLUE – 10 VAC Voltmeter
  - H: GREY – 10 VAC Voltmeter

**DETECTOR AMPEROMETER PIN DESIGNATION:**

<table>
<thead>
<tr>
<th>PIN</th>
<th>FUNCTION</th>
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<tbody>
<tr>
<td>A</td>
<td>DETECTOR AMPEROMETER PIN</td>
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<tr>
<td>B</td>
<td>DETECTOR AMPEROMETER PIN</td>
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<tr>
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</tbody>
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**STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION**

CTDOT STANDARD SHEET

GENERAL CLAUSES (TEST PROCEDURES)

OFFICE OF ENGINEERING

TR-1000-01
GENERAL NOTES:

1.5" (38mm) FROM FINISHED GRADE SUCH AS SIDEWALK TO CENTER OF PUSH BUTTON. PUSH BUTTON INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN. CURRENT EDITION COUNCIL,
2.4' X 4.8" PEDESTAL TO INCLUDE ALLOY CAP SEATED WITH STAINLESS STEEL SET SCREW.

PEDESTAL MOUNTED

SPAN POLE/MAST ARM MOUNTED

EXAMPLE ALIGNMENTS

FOR EXCLUSIVE PEDESTRIAN PHASE
NOTES:
1. PROVIDE A MINIMUM OF FOUR TERMINAL BLOCKS WITH SEPARATE SCREW TYPE TERMINAL BLOCK ON EACH SIDE.
2. INSTALL SEPARATE CABLE CLOSURE ELECTRICAL CONNECTIONS ON EACH TERMINAL BLOCK.
3. BOLT SALVATION TERMINAL BLOCKS TO CABLE CLOSURE.
4. INSTALL SEPARATE TERMINAL BLOCKS ON EACH SIDE OF CABLE CLOSURE.
5. INSTALL INDIVIDUAL TERMINAL BLOCKS ON EACH SIDE OF CABLE CLOSURE.
6. INSTALL INDIVIDUAL TERMINAL BLOCKS ON EACH SIDE OF CABLE CLOSURE.

COMMUNICATION CABLE EXTENSION BRACKET

NOTES:
1. CABLE LENGTH IS SHOWN EXTENDED TO CARRY OVERHEAD LOOP (LEADING TO TERMINAL Fittings)
2. WHEN CABLE IS TOO LARGE TO FORM LOOP, INSTALL DIRECTLY INTO CABLE WITHOUT OVERHEAD LOOPS.

OVERHEAD INTERCONNECT INSTALLATION

RECOMMENDED CONNECTION OF 21 CONDUCTOR CABLE IN CLOSURE

NOTES:
1. PLACE BOND ON STRING USING #4 WIRE AND LEAVE ROOM BETWEEN STRING TO REACH THE NEXT STRING AT ALL OF THE FOLLOWING LOCATIONS:
   A. MIDDLE POLE
   B. END POLE
   C. JUNCTION POLE
2. CONTACT THE UTILITY THAT OWNS THE NEXT STRING TO COMPLETE THE BOND.
3. LEAVE #4 WIRE ATTACHED TO CABLE OF DECREASED LENGTH.
4. INSTALL CABLE CLOSURE TO ADEQUATE LENGTH.
5. INSTALL INDIVIDUAL TERMINAL BLOCKS ON EACH SIDE OF CABLE CLOSURE.

TYPICAL COMMUNICATION CABLE CONNECTION IN CABLE CLOSURE, TYPE A

NOTES:
1. SPARE PARAS TO BE STORED BACK AND FACE TOGETHER, CABLE CLOSURE, TYPE A.
2. SEPARATE SPARES AND LEAVE ROOM BETWEEN SPARES TO ALLOW FOR STORAGE AND PIPE TO BE OUT.
3. DO NOT BOND THE CABLE SHIELD TO THE SUPPORT STRAND.
4. CONNECT ONLY BY USING A CONDUCTOR-
5. WHEN CONNECTING TO AN EXISTING SYSTEM, VARYING COORDINATES OF TRANSIENT AND RECEIVED CONDUCTORS.

TYPICAL COMMUNICATION CABLE CONNECTION IN CABLE CLOSURE, TYPE B

NOTES:
1. SPARE PARAS TO BE STORED BACK AND FACE TOGETHER, CABLE CLOSURE, TYPE B.
2. SEPARATE SPARES AND LEAVE ROOM BETWEEN SPARES TO ALLOW FOR STORAGE AND PIPE TO BE OUT.
3. DO NOT BOND THE CABLE SHIELD TO THE SUPPORT STRAND.
4. CONNECT ONLY BY USING A CONDUCTOR-
5. WHEN CONNECTING TO AN EXISTING SYSTEM, VARYING COORDINATES OF TRANSIENT AND RECEIVED CONDUCTORS.
TYPICAL PLACEMENT OF OVERHEAD SIGNS ON SIGN SUPPORTS

1. Use placement of overhead signs support as applicable.
2. Nails shall be treated with preservative.
3. Clearances above and below signs shall be 7 feet.
4. Clearances shall be 7 feet.
5. All signs are to be equal in dimensions of sign support.

DIAGRAM "A"

SIGN ORIENTATION DETAILS

FOR SIDE MOUNTED SIGNS ON STRUCTURAL STEEL BREAKAWAY SIGN SUPPORTS

1. Signs and letters in directions considered shall be 7 feet.
2. Nails shall be treated with preservative.
3. Clearances above and below signs shall be 7 feet.
4. Clearances shall be 7 feet.
5. All signs are to be equal in dimensions of sign support.

DIAGRAM "B"

TYPICAL PLACEMENT OF SIDE MOUNTED SIGNS ON STRUCTURAL STEEL BREAKAWAY SIGN SUPPORTS

1. Signs and letters in directions considered shall be 7 feet.
2. Nails shall be treated with preservative.
3. Clearances above and below signs shall be 7 feet.
4. Clearances shall be 7 feet.
5. All signs are to be equal in dimensions of sign support.

RETROREFLECTIVE STRIP DETAIL

1. Signs and letters in directions considered shall be 7 feet.
2. Nails shall be treated with preservative.
3. Clearances above and below signs shall be 7 feet.
4. Clearances shall be 7 feet.
5. All signs are to be equal in dimensions of sign support.

TYPICAL SIGN PLACEMENT DETAIL

1. Signs and letters in directions considered shall be 7 feet.
2. Nails shall be treated with preservative.
3. Clearances above and below signs shall be 7 feet.
4. Clearances shall be 7 feet.
5. All signs are to be equal in dimensions of sign support.