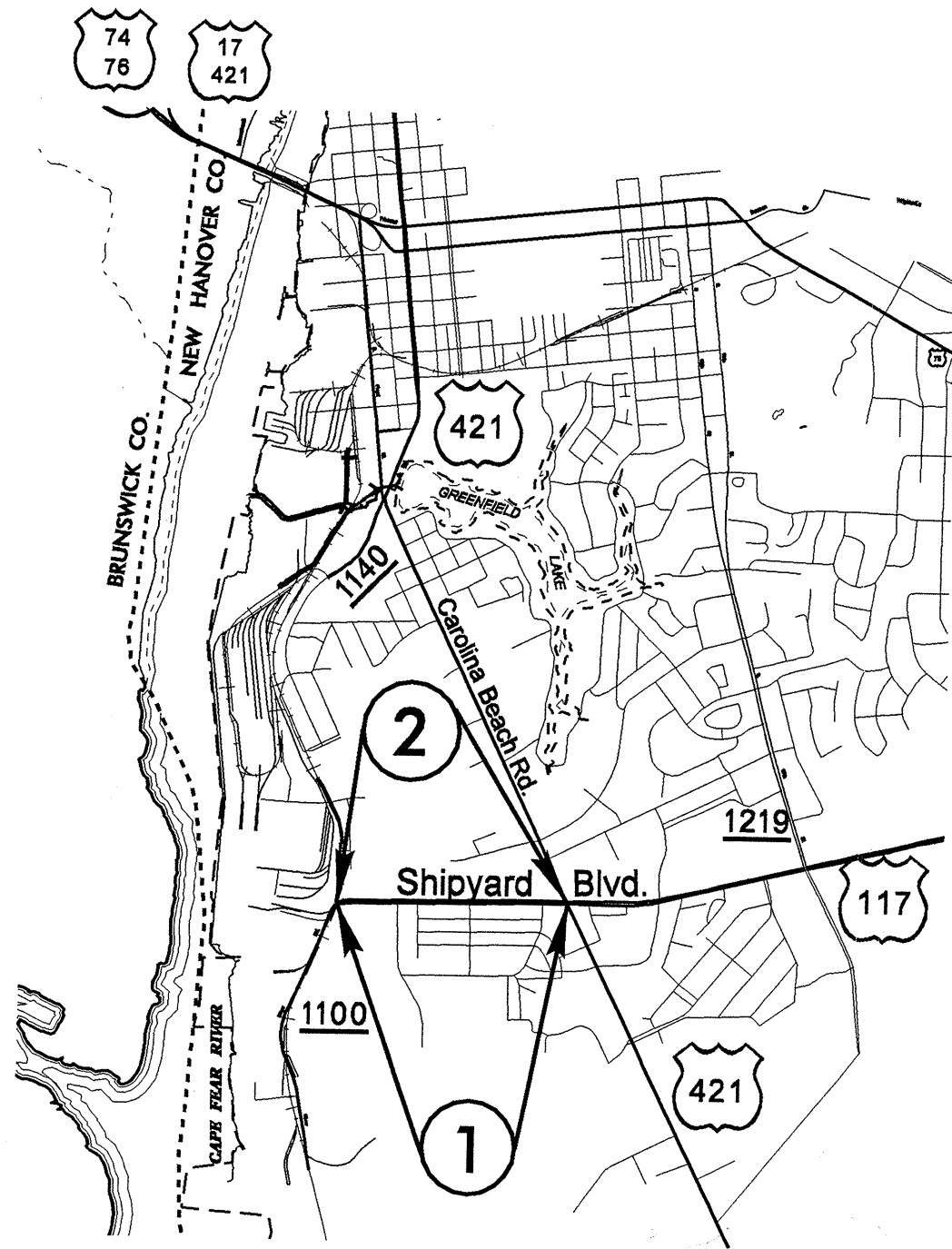
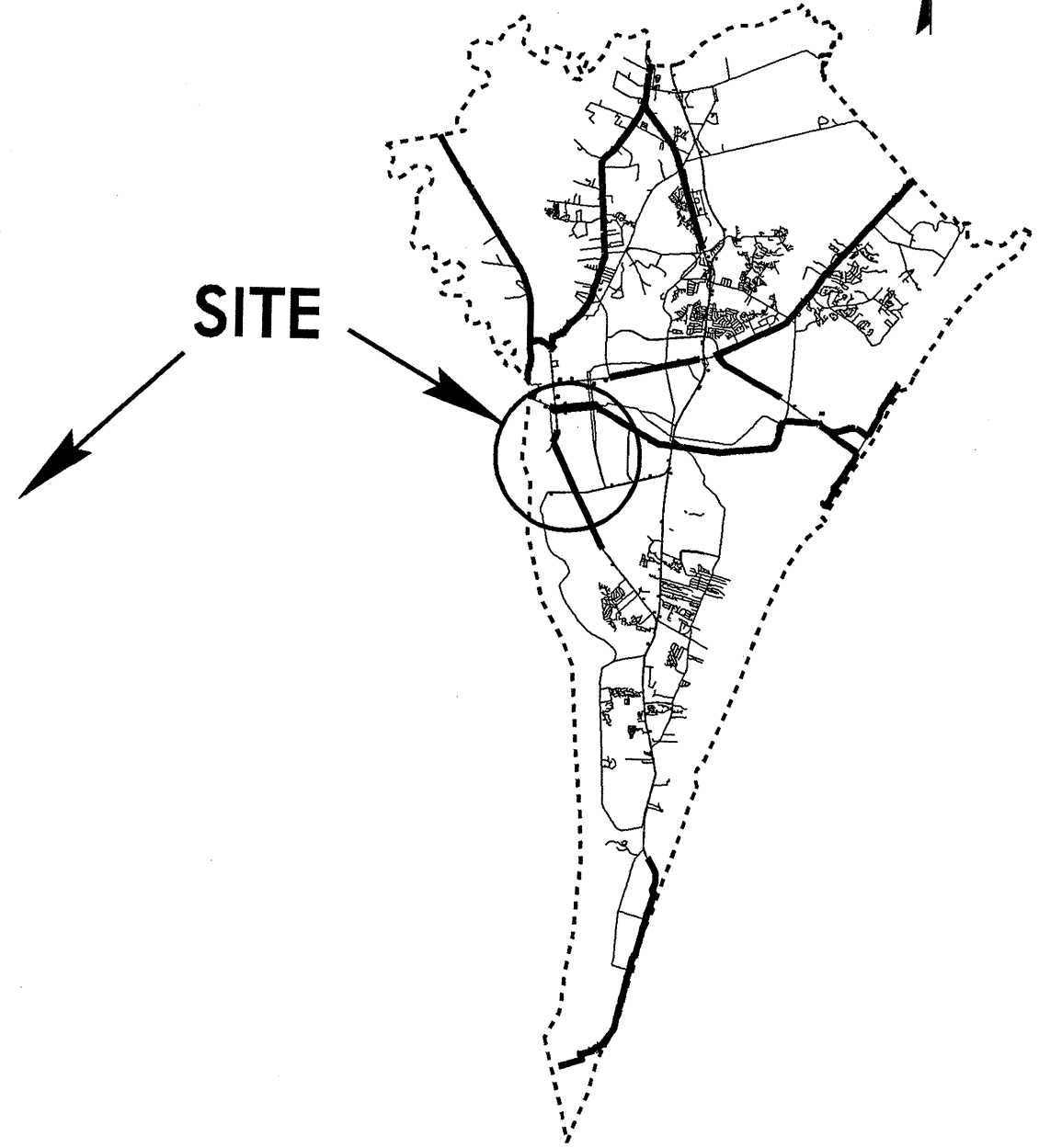


| WBS ELEMENT  | SHEET 1 OF 29 |
|--------------|---------------|
| 3CR.10651.53 |               |
| 3CR.10101.53 |               |
| 41380.3      |               |
| 3CR.20101.53 |               |
|              |               |
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**WILMINGTON**



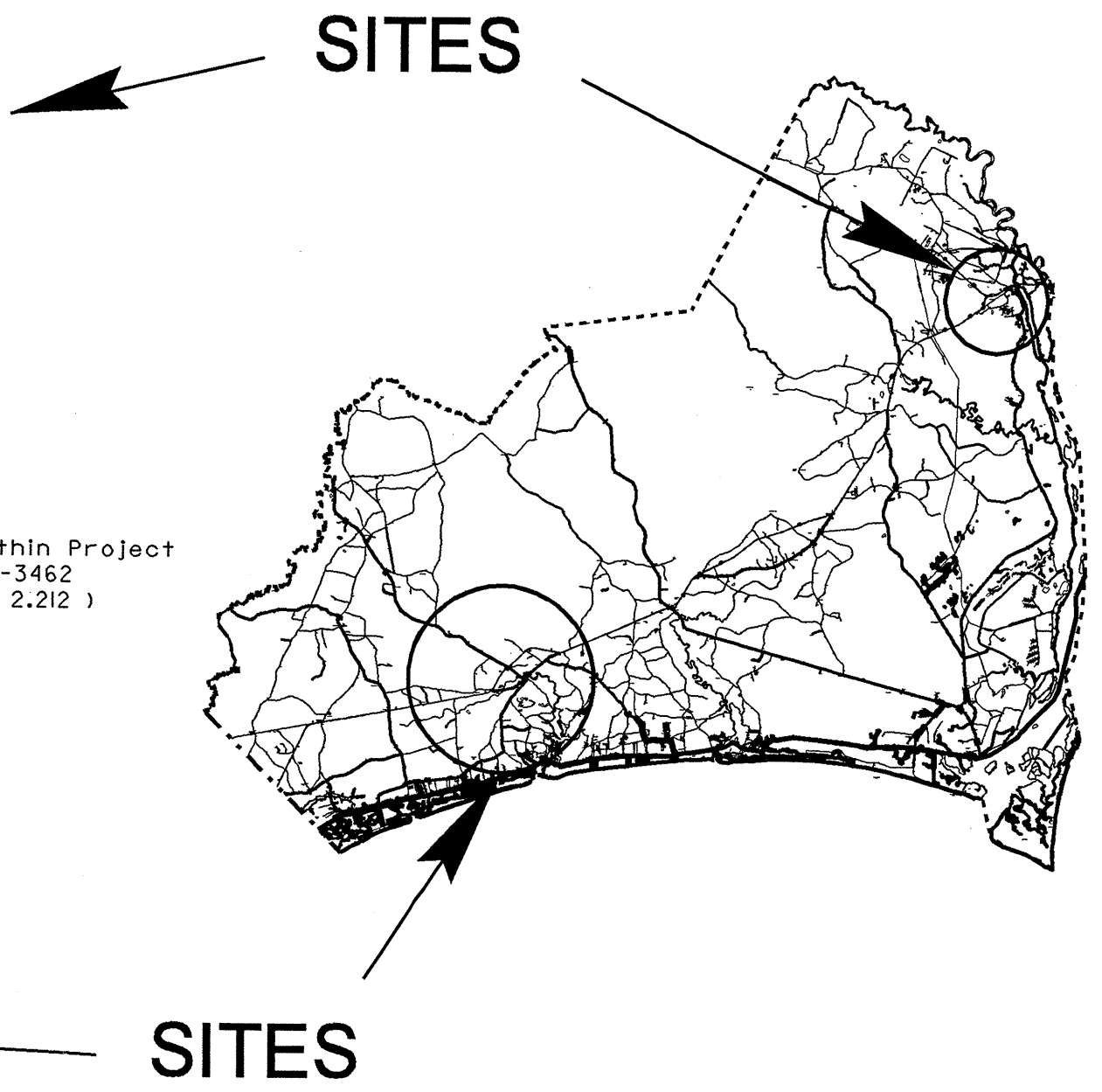
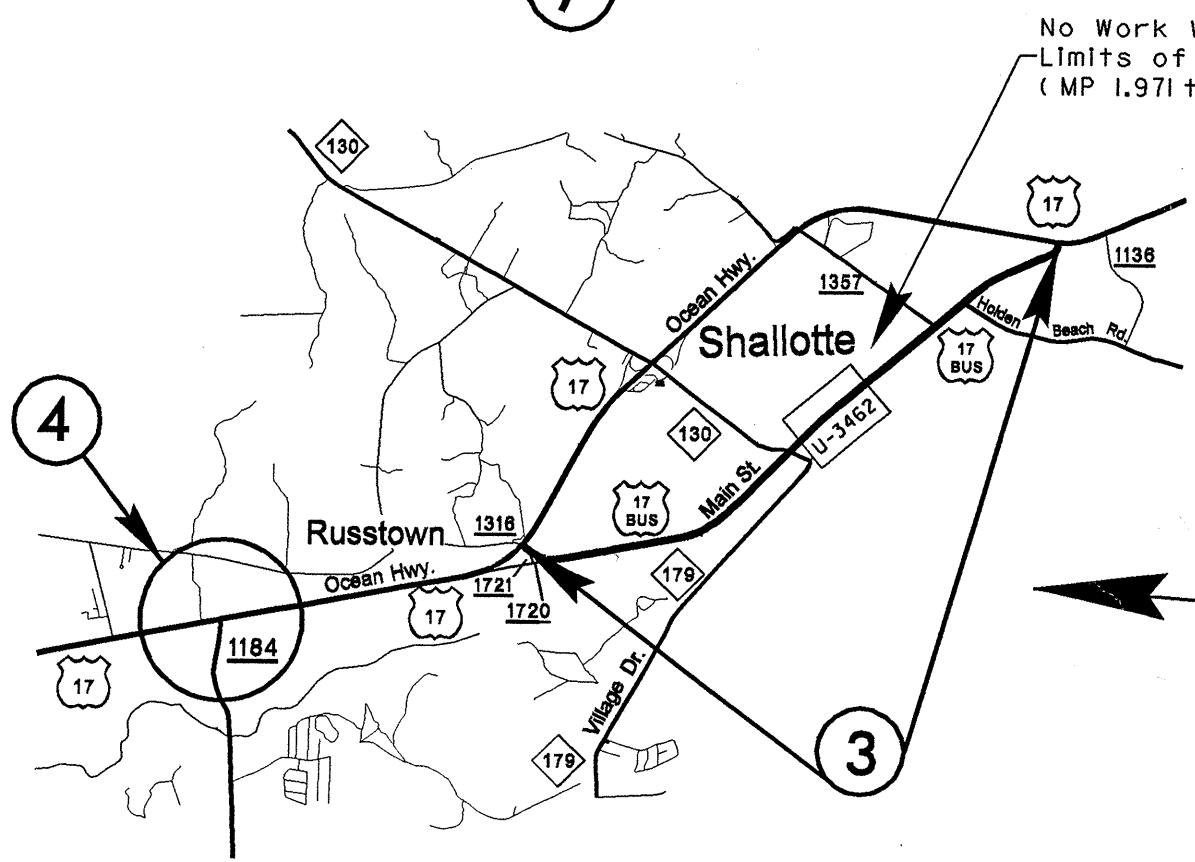
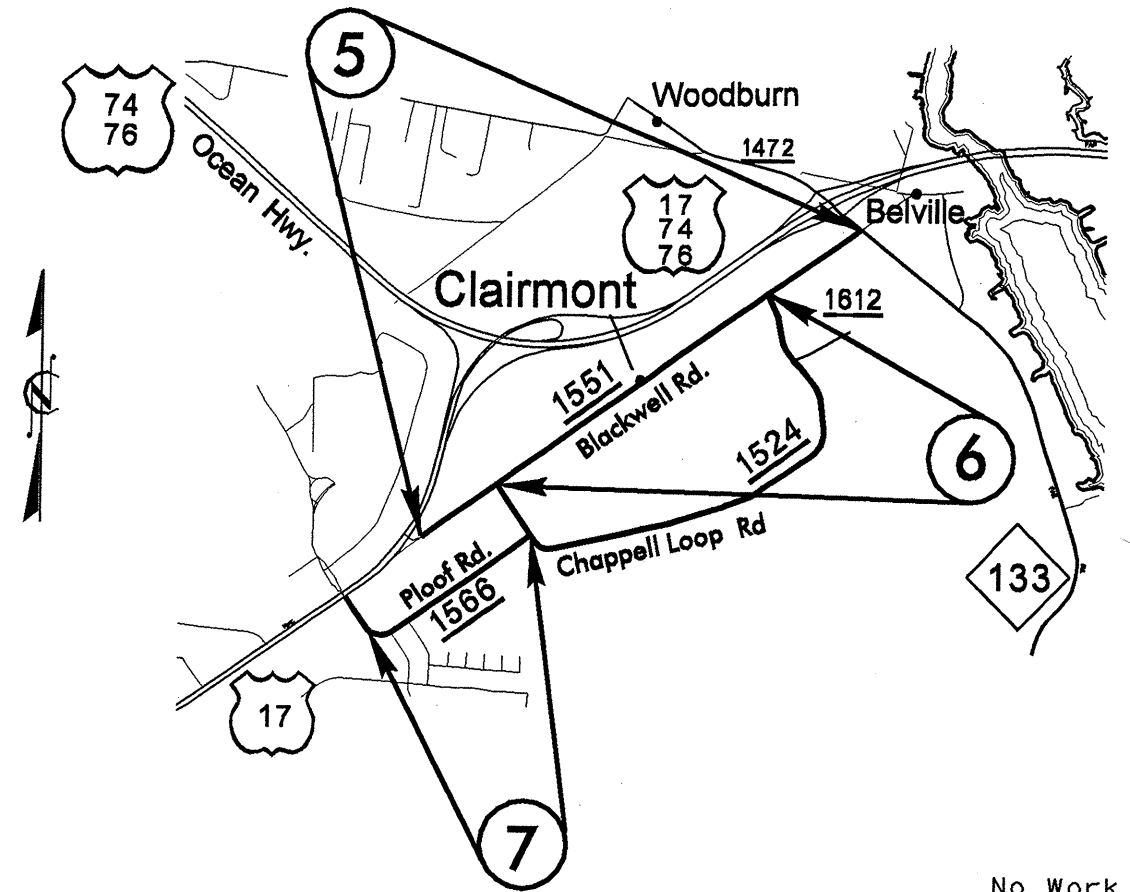
**NEW HANOVER COUNTY**

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NOT TO SCALE

Garris

| WBS ELEMENT  | SHEET 2 OF 29 |
|--------------|---------------|
| 3CR.10651.53 |               |
| 3CR.10101.53 |               |
| 41380.3      |               |
| 3CR.20101.53 |               |
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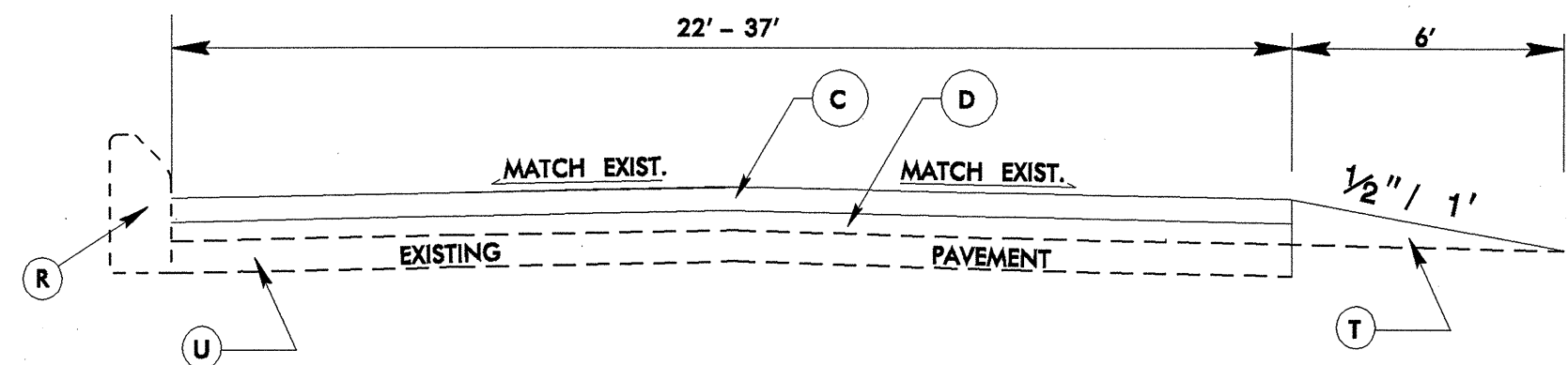


# BRUNSWICK COUNTY

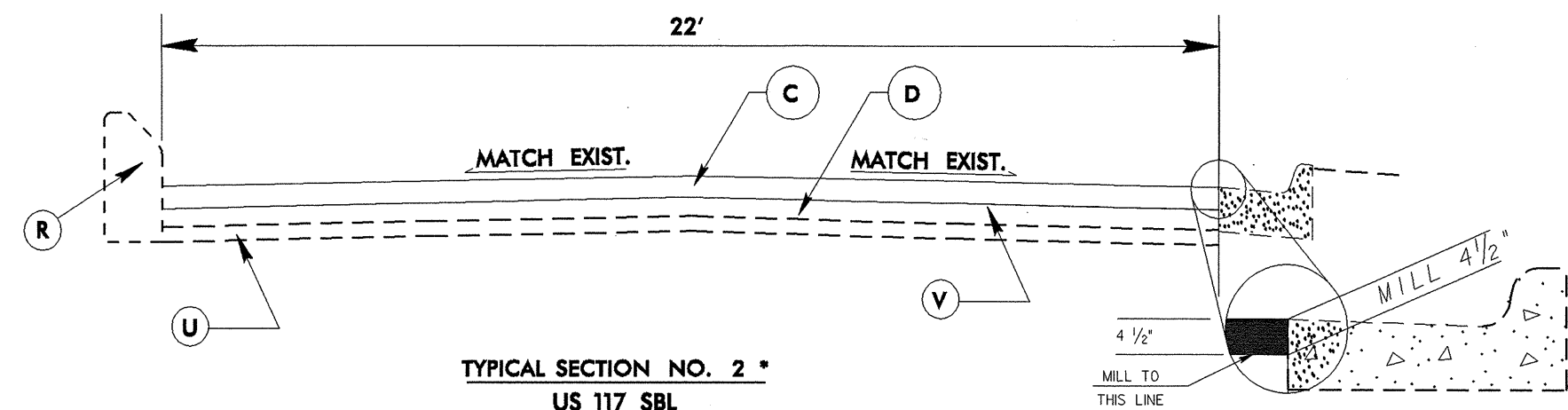
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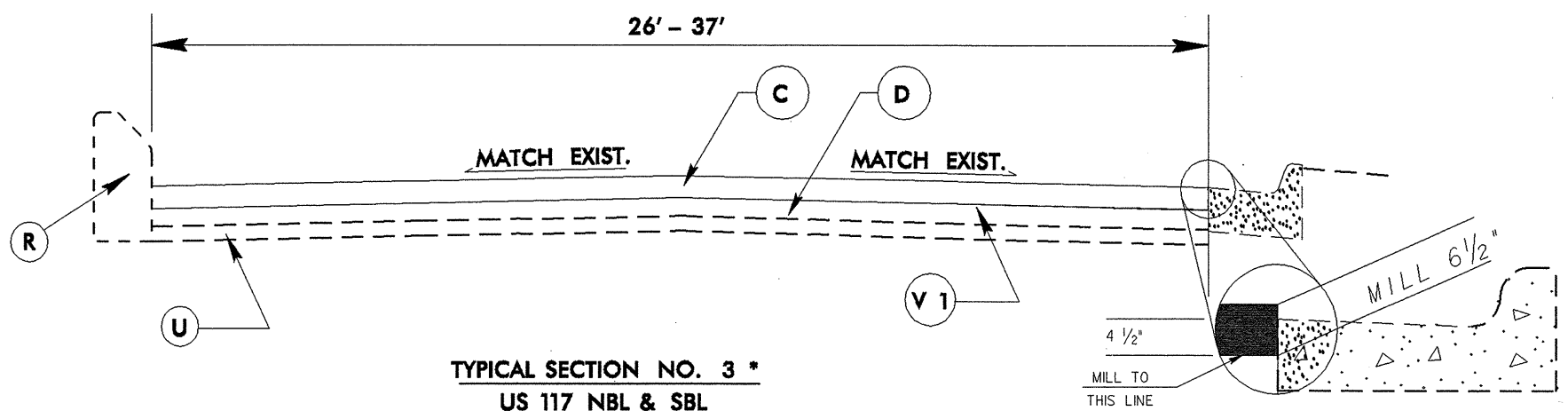
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|--------------|---------------|
| 3CR.10651.53 |               |
| 3CR.10101.53 |               |
| 41380.3      |               |
| 3CR.20101.53 |               |
|              |               |
|              |               |



TYPICAL SECTION NO. 1 \*  
US 117 NBL & SBL



TYPICAL SECTION NO. 2 \*  
US 117 SBL



TYPICAL SECTION NO. 3 \*  
US 117 NBL & SBL

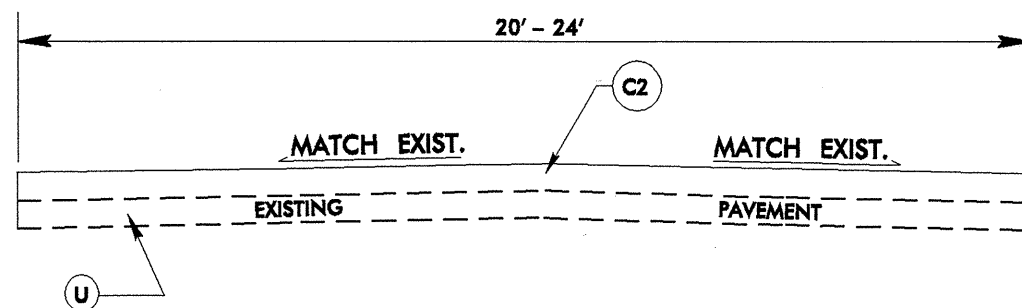
\* NOTE: INCIDENTAL MILLING SHALL BE USED TO CORRECT FINISHED PAVEMENT ELEVATIONS BETWEEN TYPICAL SECTIONS

| PAVEMENT SCHEDULE |   |
|-------------------|---|
| C                 | PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 812.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.                       |
| C1                | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.5B, AT AN AVERAGE RATE OF 188 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. |
| C2                | PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.5B, AT AN AVERAGE RATE OF 188 LBS. PER SQ. YD.                    |
| D                 | PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.              |
| D1                | PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.                  |
| D2                | PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.              |
| E                 | PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 827 LBS. PER SQ. YD.                      |
| R                 | EXISTING ASPHALT CURB.  |
| R1                | EXISTING MONOLITHIC CONCRETE ISLAND.  |
| R2                | 5" MONOLITHIC CONCRETE ISLAND.  |
| T                 | EARTH MATERIAL.   |
| U                 | EXISTING PAVEMENT.  |
| V                 | MILLING ASPHALT PAVEMENT 4 1/2" DEPTH.  |
| V1                | MILLING ASPHALT PAVEMENT 6 1/2" DEPTH.  |

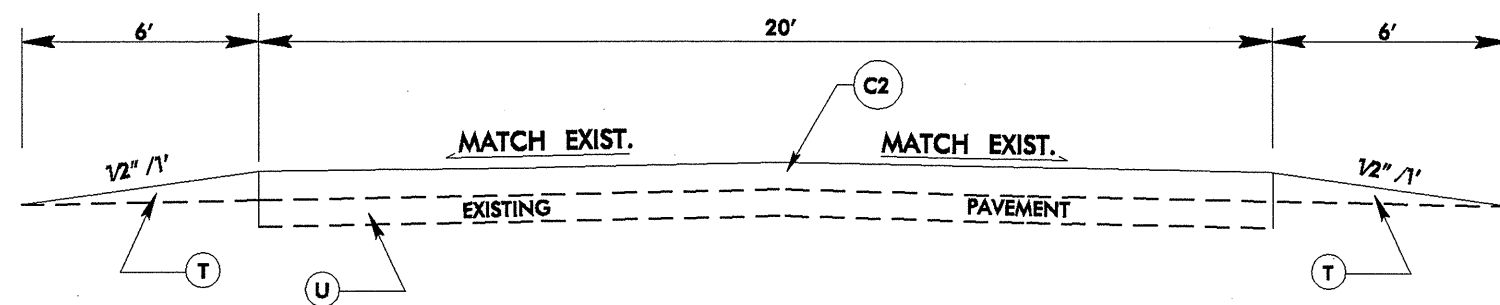
29-FEB-2008 14:50  
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| WBS ELEMENT  | SHEET 4 OF 29 |
|--------------|---------------|
| 3CR.10651.53 |               |
| 3CR.10701.53 |               |
| 41380.3      |               |
| 3CR.20101.53 |               |
|              |               |
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|              |               |

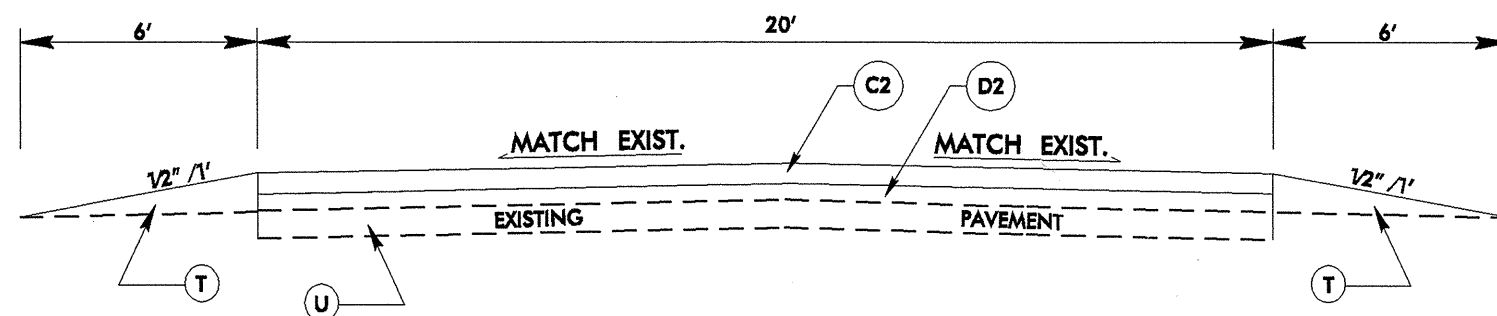
See Map #4 Plan Set starting on Sheet 11 for Typical Sections 4-13.



TYPICAL SECTION NO. 14  
SR 1551 & 1566



TYPICAL SECTION NO. 15  
SR 1524



TYPICAL SECTION NO. 16  
SR 1524

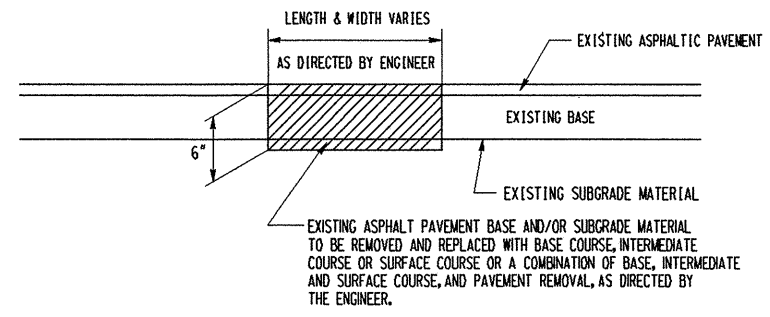
| PAVEMENT SCHEDULE |   |
|-------------------|---|
| C                 | PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 812.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.                       |
| C1                | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. |
| C2                | PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 38.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.                    |
| D                 | PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.              |
| D1                | PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.                  |
| D2                | PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.              |
| E                 | PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.                      |
| R                 | EXISTING ASPHALT CURB.  |
| R1                | EXISTING MONOLITHIC CONCRETE ISLAND.  |
| R2                | 5" MONOLITHIC CONCRETE ISLAND.  |
| T                 | EARTH MATERIAL.   |
| U                 | EXISTING PAVEMENT.  |
| V                 | MILLING ASPHALT PAVEMENT 4 1/2" DEPTH.  |
| V1                | MILLING ASPHALT PAVEMENT 6 1/2" DEPTH.  |

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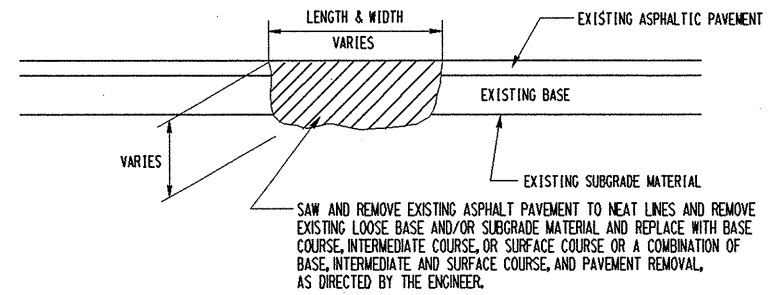


| WBS ELEMENT  | SHEET 5 OF 29 |
|--------------|---------------|
| 3CR.10651.53 |               |
| 3CR.10101.53 |               |
| 41380.3      |               |
| 3CR.20101.53 |               |
|              |               |
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|              |               |

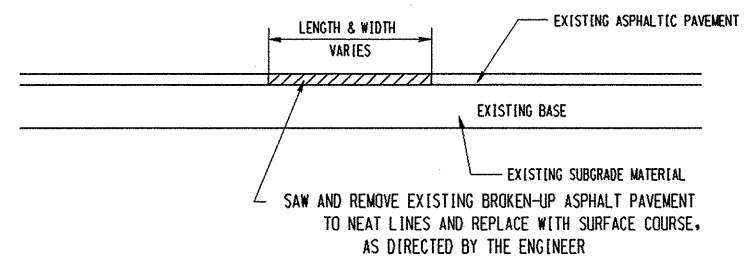
DETAILS OF REPAIRING EXISTING PAVEMENT PRIOR TO RESURFACING FOR FULL DEPTH AND MILLING



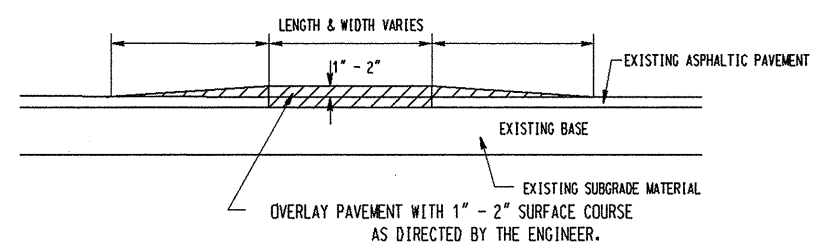
DETAIL NO. 1



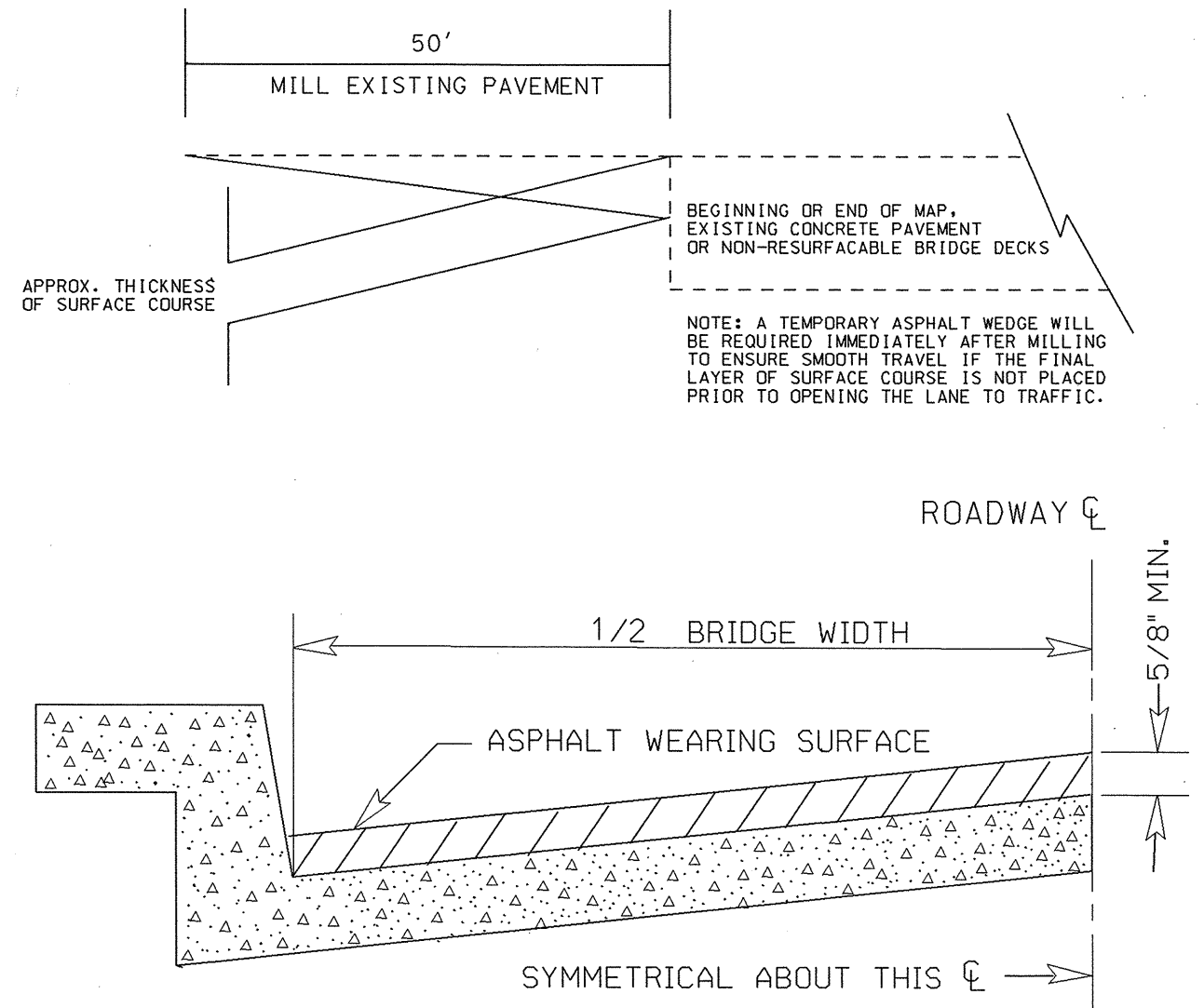
DETAIL NO. 2



DETAIL NO. 3



DETAIL NO. 4



BRIDGE HALF TYPICAL SECTION

FOR BRIDGES WITH FLOOR DRAINS, CARE SHALL BE EXERCISED IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE. ALL DRAINS SHALL BE LEFT OPEN.

THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. A THICKNESS OF NOT LESS THAN 5/8" SHALL BE PROVIDED. THE MAXIMUM THICKNESS SHALL PREFERABLY BE 1-1/2" UNLESS IT IS IMPRACTICAL TO PROVIDE A SMOOTH RIDING SURFACE OTHERWISE.

|              |               |
|--------------|---------------|
| WBS ELEMENT  | SHEET 6 OF 29 |
| 3CR.10651.53 |               |
| 3CR.10101.53 |               |
| 41380.3      |               |
| 3CR.20101.53 |               |
|              |               |
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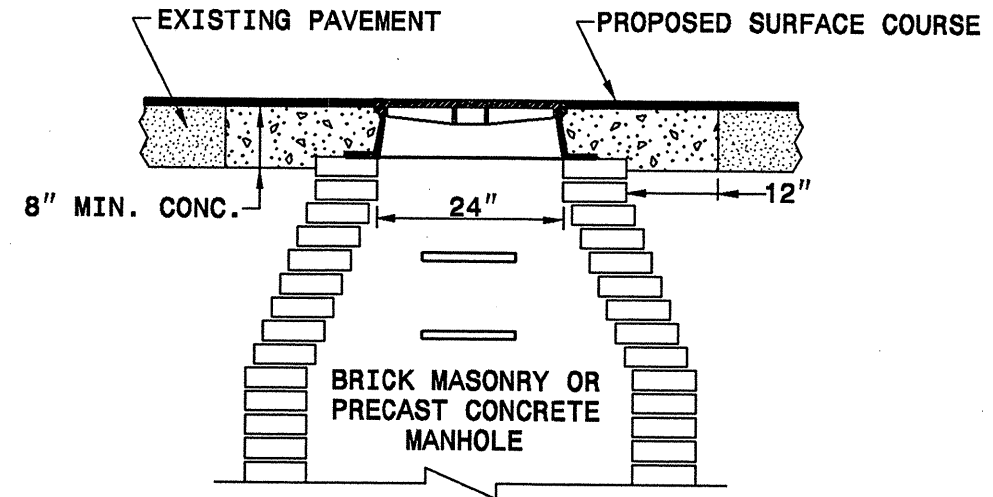
STATE OF  
NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
**MANHOLE AND VALVE BOX ADJUSTMENTS**

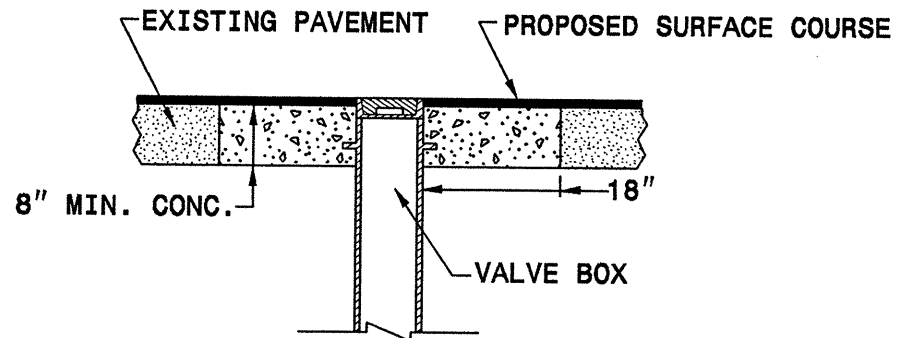
SHEET 1 OF 1  
**840D55**

**GENERAL NOTES:**

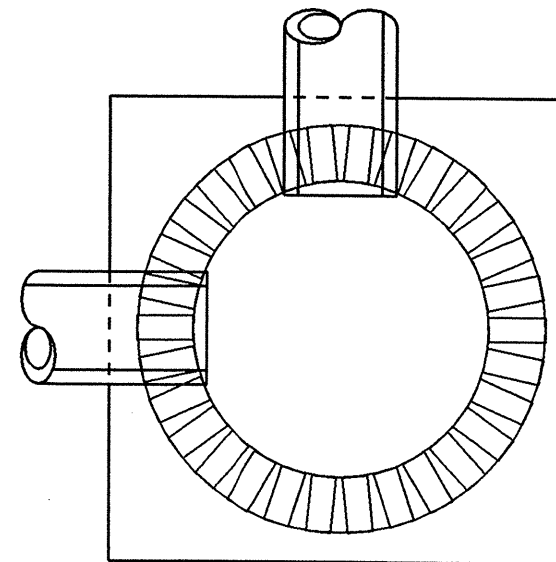
1. RAPID SET GROUT, MORTAR, OR CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
2. ALL FAULTY EXISTING BRICKWORK TO BE REMOVED AND REPLACED WITH NEW BRICK MASONRY.
3. EXCAVATION FOR THE ADJUSTMENT SHALL BE SHEER CUT ON ALL SIDES.
4. AREA BELOW 8" DEPTH CAN BE FILLED WITH 78M OR NO. 57 CLEAN STONE.
5. MORTAR SHALL BE MIXED TO NCDOT SPECIFICATIONS.
6. MORTAR JOINTS 1/2" +/- 1/8"



**MANHOLE CONCRETE ENCASEMENT**



**VALVE BOX CONCRETE ENCASEMENT**



**ELEVATION VIEW**

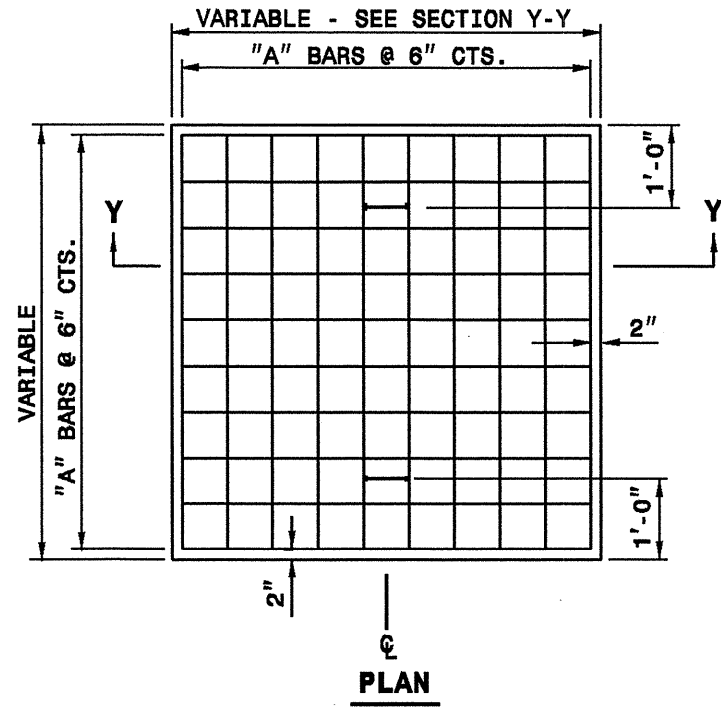
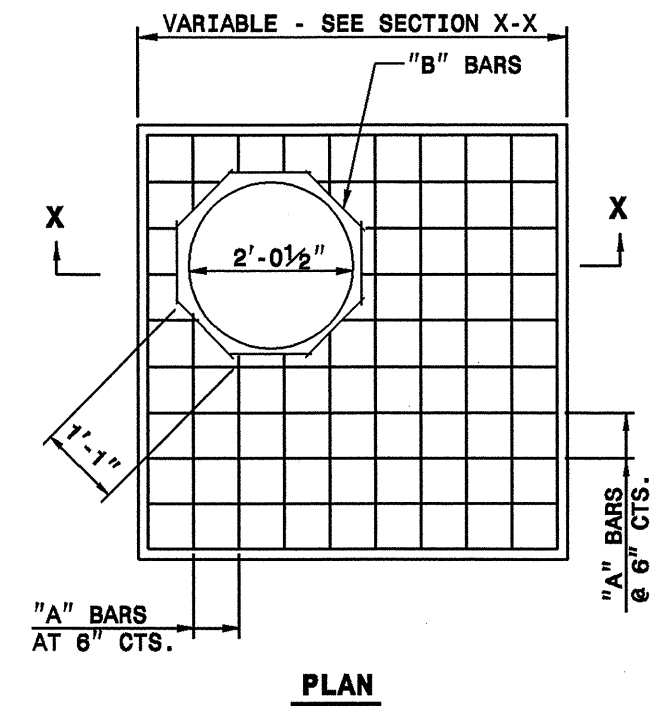
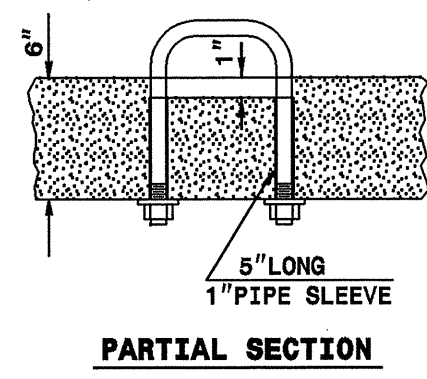
PLACE BRICK ACCORDING TO ELEVATION VIEW

STATE OF  
NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
**MANHOLE AND VALVE BOX ADJUSTMENTS**

SHEET 1 OF 1  
**840D55**

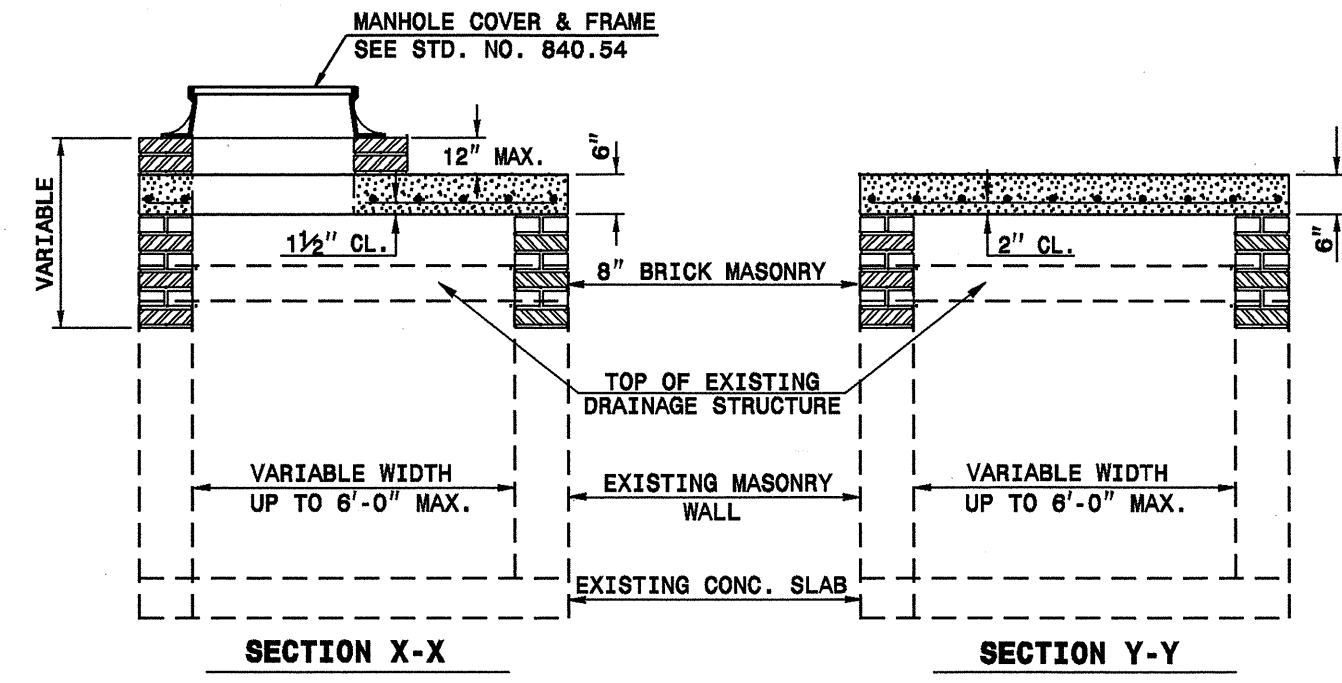
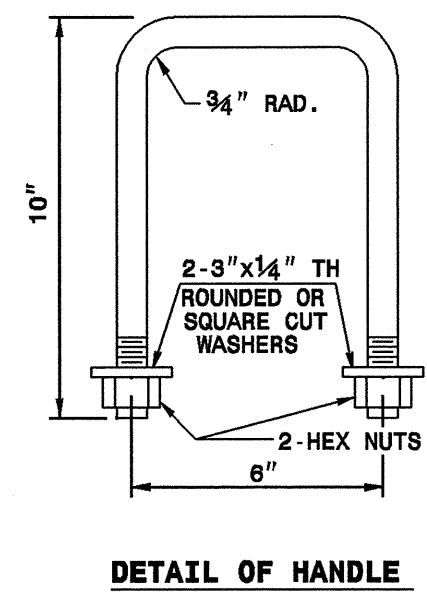




**GENERAL NOTES:**

- CONSTRUCT IN ACCORDANCE WITH SECTION 859 OF THE STANDARD SPECIFICATIONS.
- FIELD VERIFY THE DIMENSIONS FOR THE EXISTING BOXES
- DETAIL INTENDED FOR NON-TRAFFIC BEARING DRAINAGE STRUCTURES.

| BILL OF MATERIALS             |      |      |        |                   |
|-------------------------------|------|------|--------|-------------------|
| REINFORCING STEEL             |      |      |        |                   |
| CODE                          | SIZE | QTY. | LENGTH | REINF. STEEL LBS. |
| A                             | #4   | 20   | 4'-6"  | 60.12             |
| B                             | #4   | 8    | 1'-1"  | 5.79              |
| <b>TOTAL</b>                  |      |      |        | <b>65.91 *</b>    |
| MASONRY                       |      |      |        | CU YDS            |
| TOP SLAB CONCRETE CLASS "B"   |      |      |        | .433 *            |
| BRICK MASONRY PER FT HT (MIN) |      |      |        | .4111             |



**\* NOTE:**  
 QUANTITIES BASED ON 3'-6" X 3'-6" DRAINAGE STRUCTURE. ADJUST QUANTITIES FOR LARGER STRUCTURES AND MANHOLE CONSTRUCTION.

**PROJECT SERVICES UNIT  
 STANDARDS AND SPECIAL DESIGN**  
 Office 919-250-4128 FAX 919-250-4119

**DETAIL TO CONVERT EXISTING  
 DROP INLET OR CATCH BASIN  
 TO JUNCTION BOX  
 (MANHOLE OPTIONAL)**

ORIGINAL BY: T.S.S. DATE: NOV. 1997  
 MODIFIED BY: E.E.W. DATE: 8-28-02  
 CHECKED BY: DATE:  
 FILE SPEC.: /usr/details/stand/boxtojb.dgn

\*\*\*\*\*  
 CONSTRUCTION  
 \*\*\*\*\*











3/15/06

Note: Not to Scale

\*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

| WBS ELEMENT  | SHEET 10 OF 29 |
|--------------|----------------|
| 3CR.10651.53 |                |
| 3CR.10101.53 |                |
| 41380.3      |                |
| 3CR.20101.53 |                |
|              |                |
|              |                |
|              |                |

# CONVENTIONAL PLAN SHEET SYMBOLS

### BOUNDARIES AND PROPERTY:

|                                     |         |
|-------------------------------------|---------|
| State Line                          | -----   |
| County Line                         | -----   |
| Township Line                       | -----   |
| City Line                           | -----   |
| Reservation Line                    | -----   |
| Property Line                       | -----   |
| Existing Iron Pin                   | ○       |
| Property Corner                     | ⊗       |
| Property Monument                   | □       |
| Parcel/Sequence Number              | (23)    |
| Existing Fence Line                 | -x-x-x- |
| Proposed Woven Wire Fence           | ○       |
| Proposed Chain Link Fence           | □       |
| Proposed Barbed Wire Fence          | ◇       |
| Existing Wetland Boundary           | -----   |
| Proposed Wetland Boundary           | -----   |
| Existing Endangered Animal Boundary | -----   |
| Existing Endangered Plant Boundary  | -----   |

### BUILDINGS AND OTHER CULTURE:

|                               |   |
|-------------------------------|---|
| Gas Pump Vent or U/G Tank Cap | ○ |
| Sign                          | ○ |
| Well                          | ⊕ |
| Small Mine                    | ⊗ |
| Foundation                    | □ |
| Area Outline                  | □ |
| Cemetery                      | ⊕ |
| Building                      | □ |
| School                        | ⊕ |
| Church                        | ⊕ |
| Dam                           | ⊕ |

### HYDROLOGY:

|                                    |       |
|------------------------------------|-------|
| Stream or Body of Water            | ----- |
| Hydro, Pool or Reservoir           | ----- |
| Jurisdictional Stream              | ----- |
| Buffer Zone 1                      | ----- |
| Buffer Zone 2                      | ----- |
| Flow Arrow                         | ←     |
| Disappearing Stream                | ----- |
| Spring                             | ○     |
| Wetland                            | ----- |
| Proposed Lateral, Tail, Head Ditch | ----- |
| False Sump                         | ----- |

### RAILROADS:

|                    |       |
|--------------------|-------|
| Standard Gauge     | ----- |
| RR Signal Milepost | ----- |
| Switch             | ----- |
| RR Abandoned       | ----- |
| RR Dismantled      | ----- |

### RIGHT OF WAY:

|  |       |
|--|-------|
| Baseline Control Point                                     | ◆     |
| Existing Right of Way Marker                               | △     |
| Existing Right of Way Line                                 | ----- |
| Proposed Right of Way Line                                 | ----- |
| Proposed Right of Way Line with Iron Pin and Cap Marker    | ----- |
| Proposed Right of Way Line with Concrete or Granite Marker | ----- |
| Existing Control of Access                                 | ----- |
| Proposed Control of Access                                 | ----- |
| Existing Easement Line                                     | ----- |
| Proposed Temporary Construction Easement                   | ----- |
| Proposed Temporary Drainage Easement                       | ----- |
| Proposed Permanent Drainage Easement                       | ----- |
| Proposed Permanent Utility Easement                        | ----- |

### ROADS AND RELATED FEATURES:

|                                      |       |
|--------------------------------------|-------|
| Existing Edge of Pavement            | ----- |
| Existing Curb                        | ----- |
| Proposed Slope Stakes Cut            | ----- |
| Proposed Slope Stakes Fill           | ----- |
| Proposed Wheel Chair Ramp            | ----- |
| Proposed Wheel Chair Ramp Curb Cut   | ----- |
| Curb Cut for Future Wheel Chair Ramp | ----- |
| Existing Metal Guardrail             | ----- |
| Proposed Guardrail                   | ----- |
| Existing Cable Guiderail             | ----- |
| Proposed Cable Guiderail             | ----- |
| Equality Symbol                      | ⊕     |
| Pavement Removal                     | ----- |

### VEGETATION:

|              |       |
|--------------|-------|
| Single Tree  | ⊕     |
| Single Shrub | ⊕     |
| Hedge        | ----- |
| Woods Line   | ----- |
| Orchard      | ----- |
| Vineyard     | ----- |

### EXISTING STRUCTURES:

|  |       |
|--|-------|
| MAJOR:                                   |       |
| Bridge, Tunnel or Box Culvert            | ----- |
| Bridge Wing Wall, Head Wall and End Wall | ----- |
| MINOR:                                   |       |
| Head and End Wall                        | ----- |
| Pipe Culvert                             | ----- |
| Footbridge                               | ----- |
| Drainage Box: Catch Basin, DI or JB      | ----- |
| Paved Ditch Gutter                       | ----- |
| Storm Sewer Manhole                      | ----- |
| Storm Sewer                              | ----- |

### UTILITIES:

|                                     |       |
|-------------------------------------|-------|
| POWER:                              |       |
| Existing Power Pole                 | ----- |
| Proposed Power Pole                 | ----- |
| Existing Joint Use Pole             | ----- |
| Proposed Joint Use Pole             | ----- |
| Power Manhole                       | ----- |
| Power Line Tower                    | ----- |
| Power Transformer                   | ----- |
| U/G Power Cable Hand Hole           | ----- |
| H-Frame Pole                        | ----- |
| Recorded U/G Power Line             | ----- |
| Designated U/G Power Line (S.U.E.*) | ----- |

### TELEPHONE:

|   |       |
|---|-------|
| Existing Telephone Pole                     | ----- |
| Proposed Telephone Pole                     | ----- |
| Telephone Manhole                           | ----- |
| Telephone Booth                             | ----- |
| Telephone Pedestal                          | ----- |
| Telephone Cell Tower                        | ----- |
| U/G Telephone Cable Hand Hole               | ----- |
| Recorded U/G Telephone Cable                | ----- |
| Designated U/G Telephone Cable (S.U.E.*)    | ----- |
| Recorded U/G Telephone Conduit              | ----- |
| Designated U/G Telephone Conduit (S.U.E.*)  | ----- |
| Recorded U/G Fiber Optics Cable             | ----- |
| Designated U/G Fiber Optics Cable (S.U.E.*) | ----- |

### WATER:

|                                     |       |
|-------------------------------------|-------|
| Water Manhole                       | ----- |
| Water Meter                         | ----- |
| Water Valve                         | ----- |
| Water Hydrant                       | ----- |
| Recorded U/G Water Line             | ----- |
| Designated U/G Water Line (S.U.E.*) | ----- |
| Above Ground Water Line             | ----- |

### TV:

|  |       |
|--|-------|
| TV Satellite Dish                          | ----- |
| TV Pedestal                                | ----- |
| TV Tower                                   | ----- |
| U/G TV Cable Hand Hole                     | ----- |
| Recorded U/G TV Cable                      | ----- |
| Designated U/G TV Cable (S.U.E.*)          | ----- |
| Recorded U/G Fiber Optic Cable             | ----- |
| Designated U/G Fiber Optic Cable (S.U.E.*) | ----- |

### GAS:

|                                   |       |
|-----------------------------------|-------|
| Gas Valve                         | ----- |
| Gas Meter                         | ----- |
| Recorded U/G Gas Line             | ----- |
| Designated U/G Gas Line (S.U.E.*) | ----- |
| Above Ground Gas Line             | ----- |

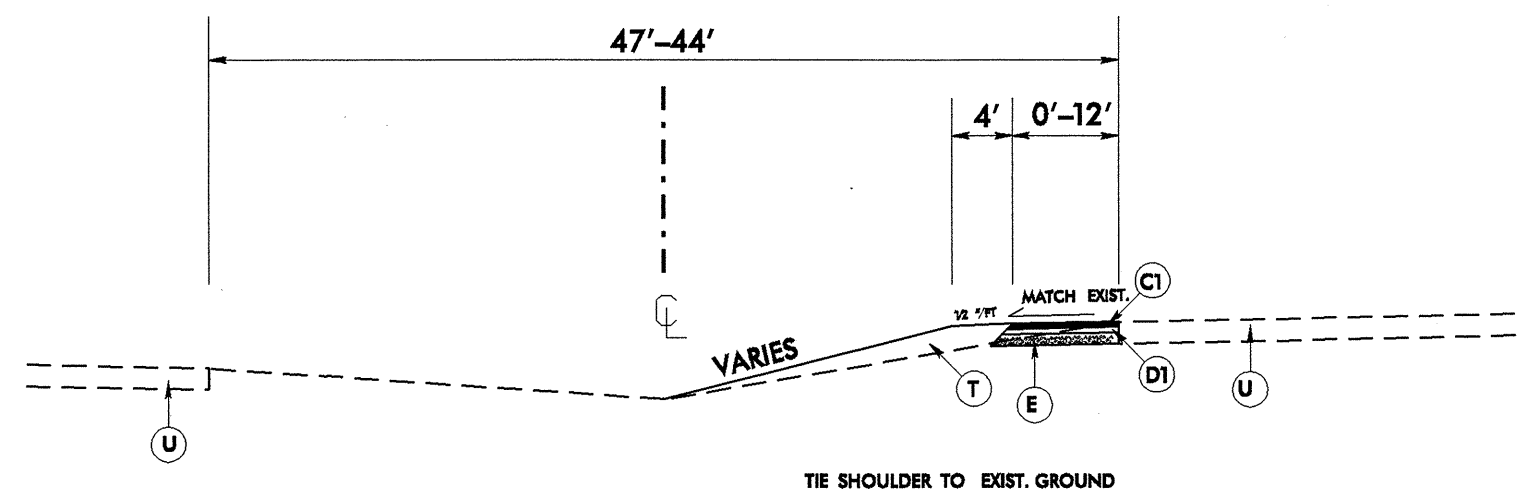
### SANITARY SEWER:

|  |       |
|--|-------|
| Sanitary Sewer Manhole                   | ----- |
| Sanitary Sewer Cleanout                  | ----- |
| U/G Sanitary Sewer Line                  | ----- |
| Above Ground Sanitary Sewer              | ----- |
| Recorded SS Forced Main Line             | ----- |
| Designated SS Forced Main Line (S.U.E.*) | ----- |

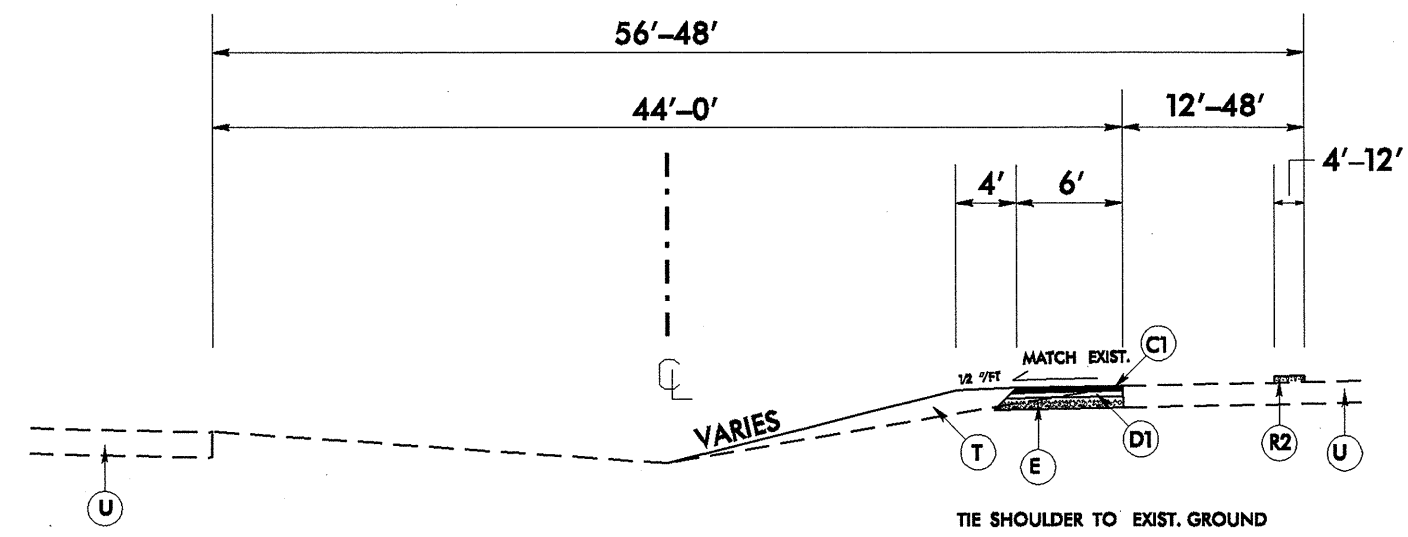
### MISCELLANEOUS:

|  |       |
|--|-------|
| Utility Pole                           | ----- |
| Utility Pole with Base                 | ----- |
| Utility Located Object                 | ----- |
| Utility Traffic Signal Box             | ----- |
| Utility Unknown U/G Line               | ----- |
| U/G Tank; Water, Gas, Oil              | ----- |
| A/G Tank; Water, Gas, Oil              | ----- |
| U/G Test Hole (S.U.E.*)                | ----- |
| Abandoned According to Utility Records | ----- |
| End of Information                     | ----- |

|              |                |
|--------------|----------------|
| WBS ELEMENT  | SHEET 11 OF 29 |
| 3CR.10651.53 |                |
| 3CR.10101.53 |                |
| 41380.3      |                |
| 3CR.20101.53 |                |
|              |                |
|              |                |



**TYPICAL SECTION NO. 4**  
 STA. -L- 628+30.09 TO STA. -L- 633+71.30  
 US 17

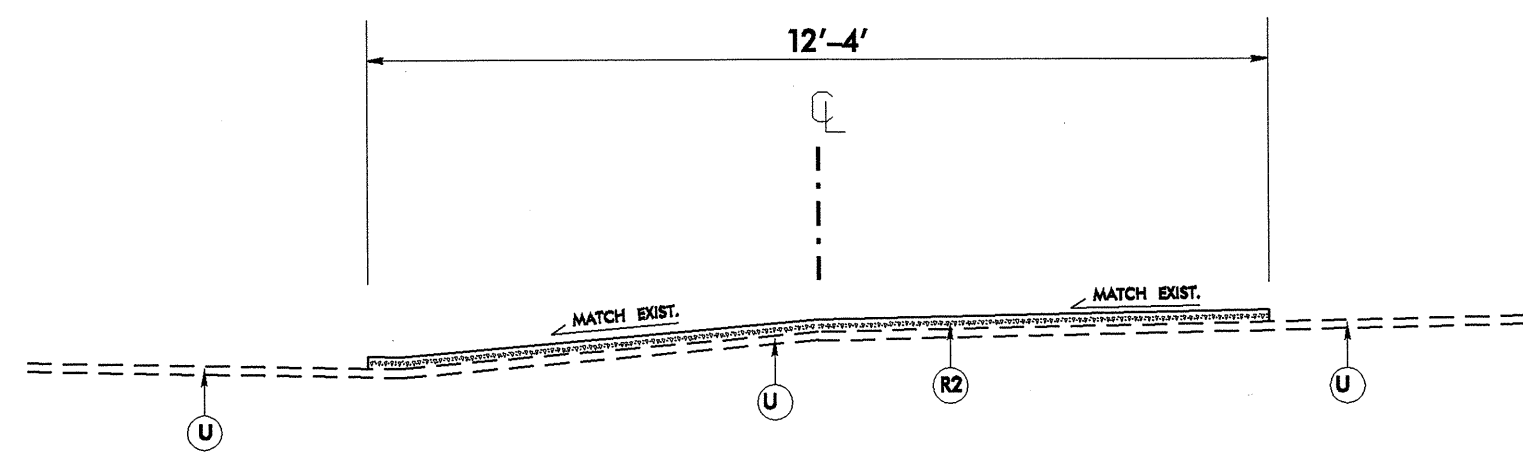


**TYPICAL SECTION NO. 5**  
 STA. -L- 633+71.30 TO STA. -L- 635+49.84  
 US 17

| PAVEMENT SCHEDULE |   |
|-------------------|---|
| C                 | PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S12.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.                       |
| C1                | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. |
| C2                | PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.                    |
| D                 | PROP. APPROX. 2 1/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 265 LBS. PER SQ. YD.              |
| D1                | PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.                  |
| D2                | PROP. APPROX. 2 1/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 265 LBS. PER SQ. YD.              |
| E                 | PROP. APPROX. 8 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 827 LBS. PER SQ. YD.                      |
| R                 | EXISTING ASPHALT CURB.  |
| R1                | EXISTING MONOLITHIC CONCRETE ISLAND.  |
| R2                | 5" MONOLITHIC CONCRETE ISLAND.  |
| T                 | EARTH MATERIAL.   |
| U                 | EXISTING PAVEMENT.  |
| V                 | MILLING ASPHALT PAVEMENT 4 1/2" DEPTH.  |
| V1                | MILLING ASPHALT PAVEMENT 8 1/2" DEPTH.  |

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| WBS ELEMENT  | SHEET 12 OF 29 |
| 3CR.10651.53 |                |
| 3CR.10101.53 |                |
| 41380.3      |                |
| 3CR.20101.53 |                |
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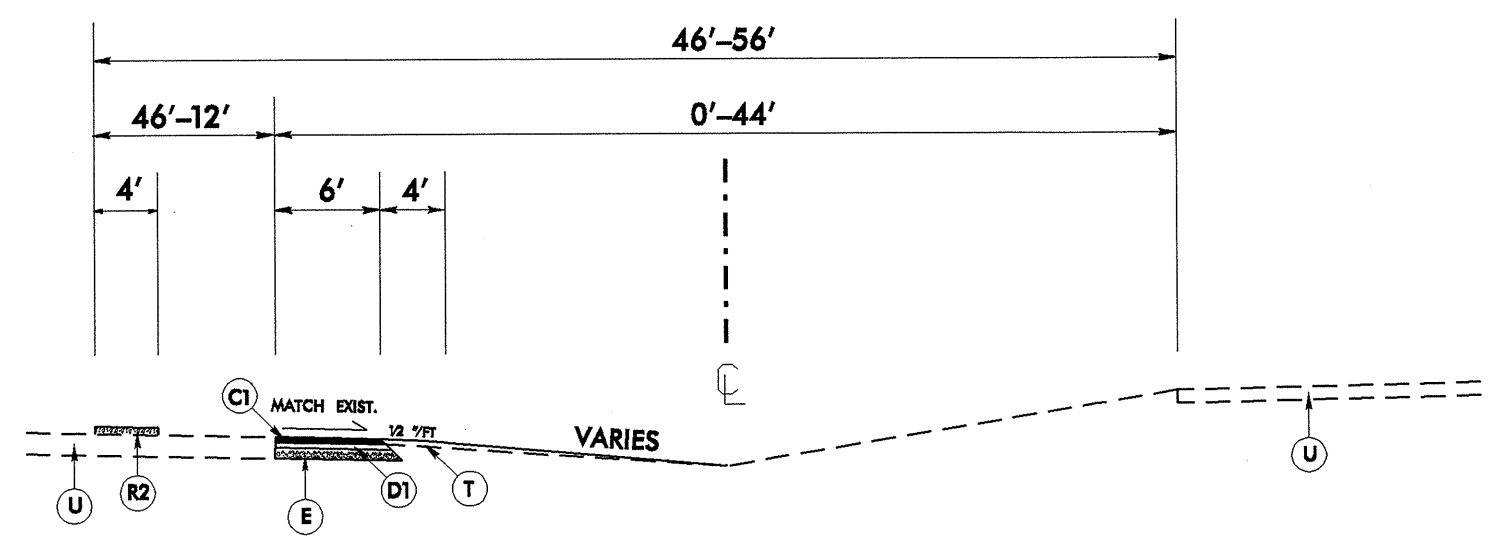


**TYPICAL SECTION NO. 6**

STA. -L- 635+49.84 TO STA. -L- 636+37.91

US 17

\*SEE SHEET 7, DETAIL 1 FOR ACTUAL 5" CONCRETE ISLAND WIDTHS\*



TIE SHOULDER TO EXIST. GROUND

**TYPICAL SECTION NO. 7**

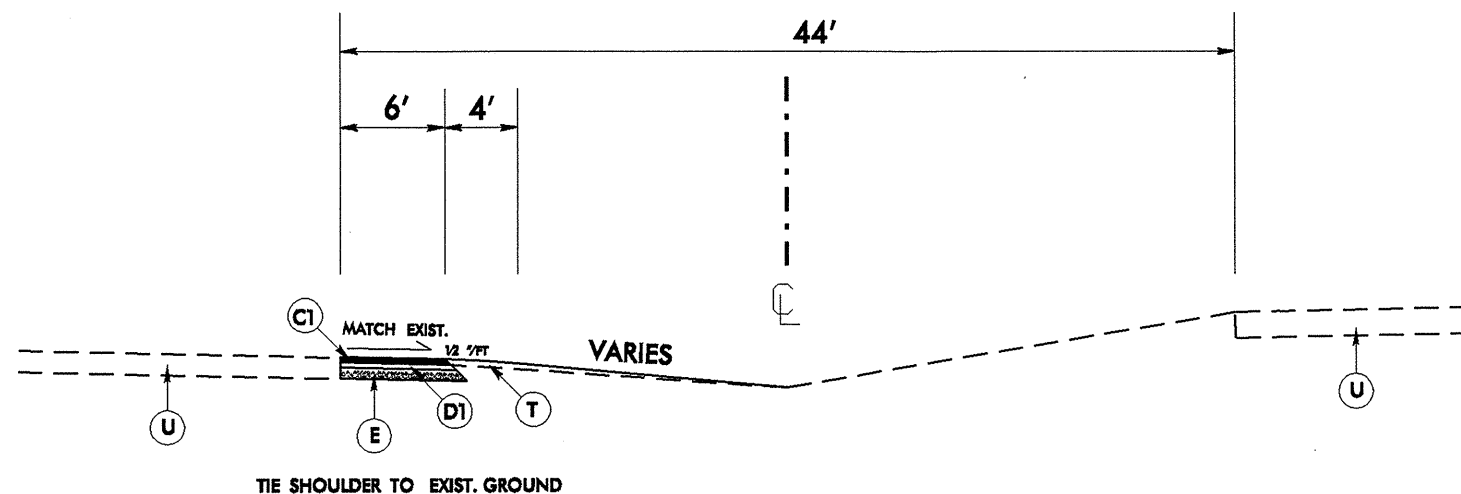
STA. -L- 636+37.91 TO STA. -L- 637+68.55

US 17

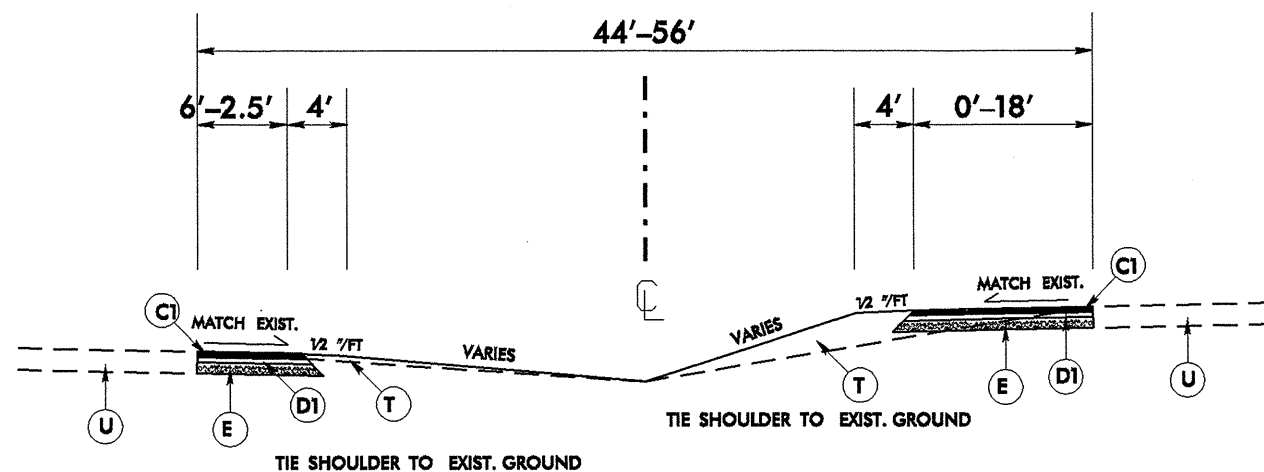
| PAVEMENT SCHEDULE |   |
|-------------------|---|
| C                 | PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 512.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.                       |
| C1                | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE 59.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. |
| C2                | PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 59.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.                    |
| D                 | PROP. APPROX. 2 1/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.              |
| D1                | PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.                  |
| D2                | PROP. APPROX. 2 1/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.              |
| E                 | PROP. APPROX. 5 1/4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 827 LBS. PER SQ. YD.                      |
| R                 | EXISTING ASPHALT CURB.  |
| R1                | EXISTING MONOLITHIC CONCRETE ISLAND.  |
| R2                | 5" MONOLITHIC CONCRETE ISLAND.  |
| T                 | EARTH MATERIAL.   |
| U                 | EXISTING PAVEMENT.  |
| V                 | MILLING ASPHALT PAVEMENT 4 1/2" DEPTH.  |
| V1                | MILLING ASPHALT PAVEMENT 8 1/2" DEPTH.  |

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| WBS ELEMENT  | SHEET 13 OF 29 |
| 3CR.10651.53 |                |
| 3CR.10101.53 |                |
| 41380.3      |                |
| 3CR.20101.53 |                |
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**TYPICAL SECTION NO. 8**  
 STA. -L- 637+68.55 TO STA. -L- 638+50.33  
 US 17

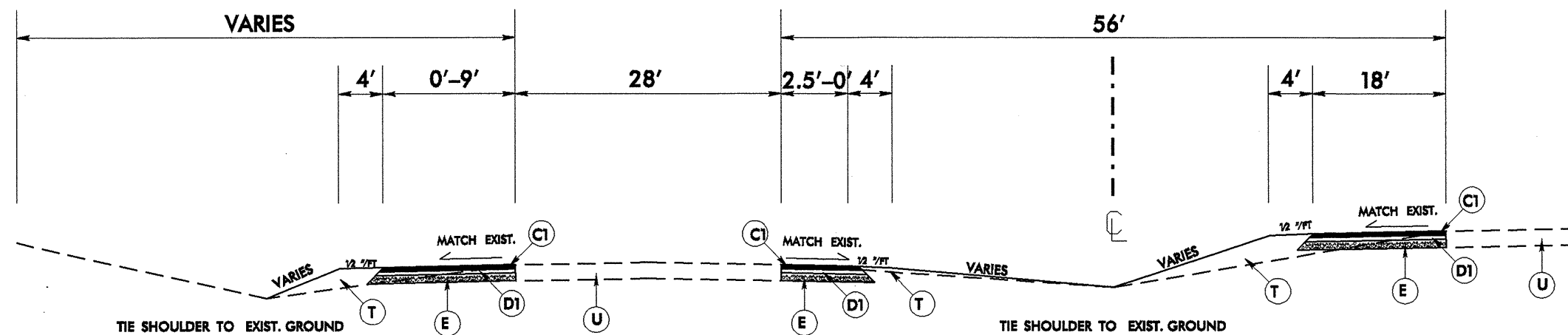


**TYPICAL SECTION NO. 9**  
 STA. -L- 638+50.33 TO STA. -L- 642+73.11  
 US 17

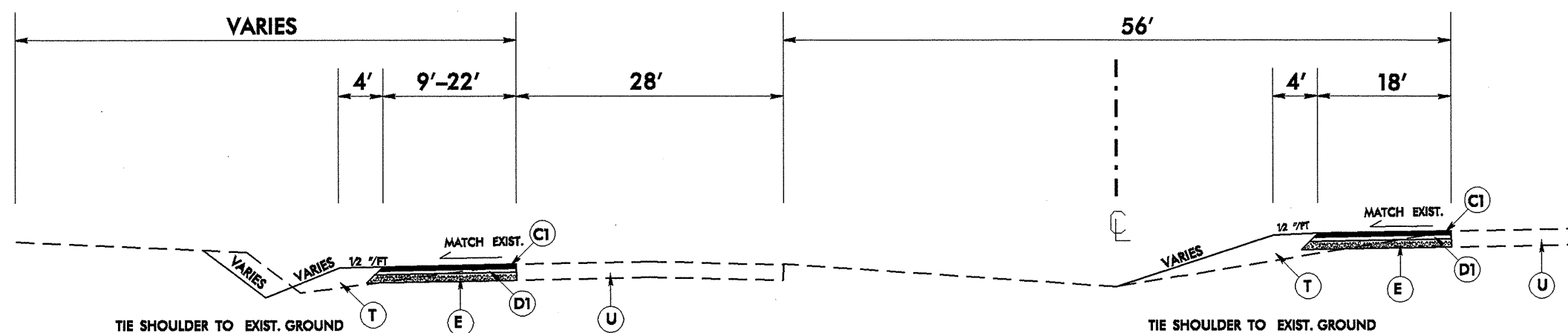
| PAVEMENT SCHEDULE |   |
|-------------------|---|
| C                 | PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 812.8C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.                       |
| C1                | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.5B, AT AN AVERAGE RATE OF 188 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. |
| C2                | PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.5B, AT AN AVERAGE RATE OF 188 LBS. PER SQ. YD.                    |
| D                 | PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.              |
| D1                | PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.                  |
| D2                | PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.              |
| E                 | PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE 825.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.                      |
| R                 | EXISTING ASPHALT CURB.  |
| R1                | EXISTING MONOLITHIC CONCRETE ISLAND.  |
| R2                | 5" MONOLITHIC CONCRETE ISLAND.  |
| T                 | EARTH MATERIAL.   |
| U                 | EXISTING PAVEMENT.  |
| V                 | MILLING ASPHALT PAVEMENT 4 1/2" DEPTH.  |
| V1                | MILLING ASPHALT PAVEMENT 8 1/2" DEPTH.  |

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| WBS ELEMENT  | SHEET 14 OF 29 |
| 3CR.10651.53 |                |
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| 41380.3      |                |
| 3CR.20101.53 |                |
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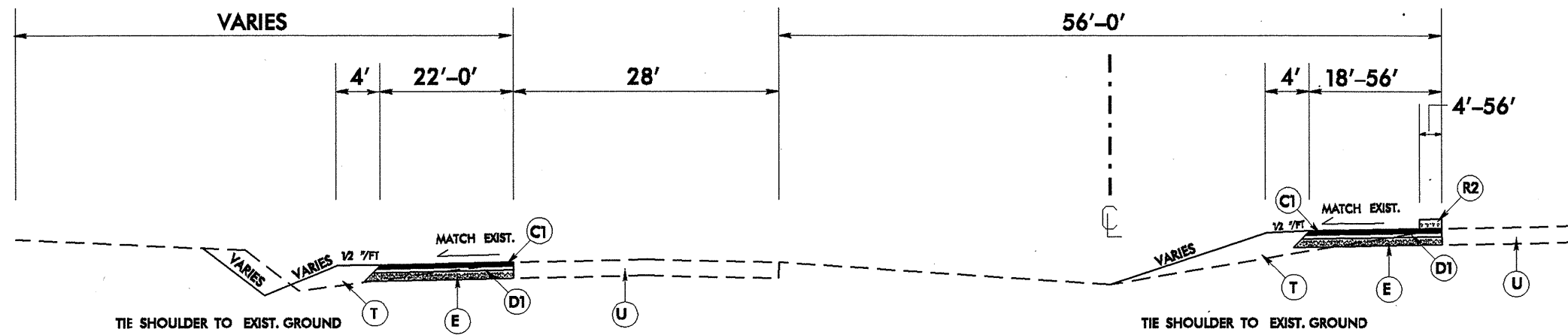
**TYPICAL SECTION NO. 10**  
 STA. -L- 642+73.11 TO STA. -L- 643+23.57  
 US 17



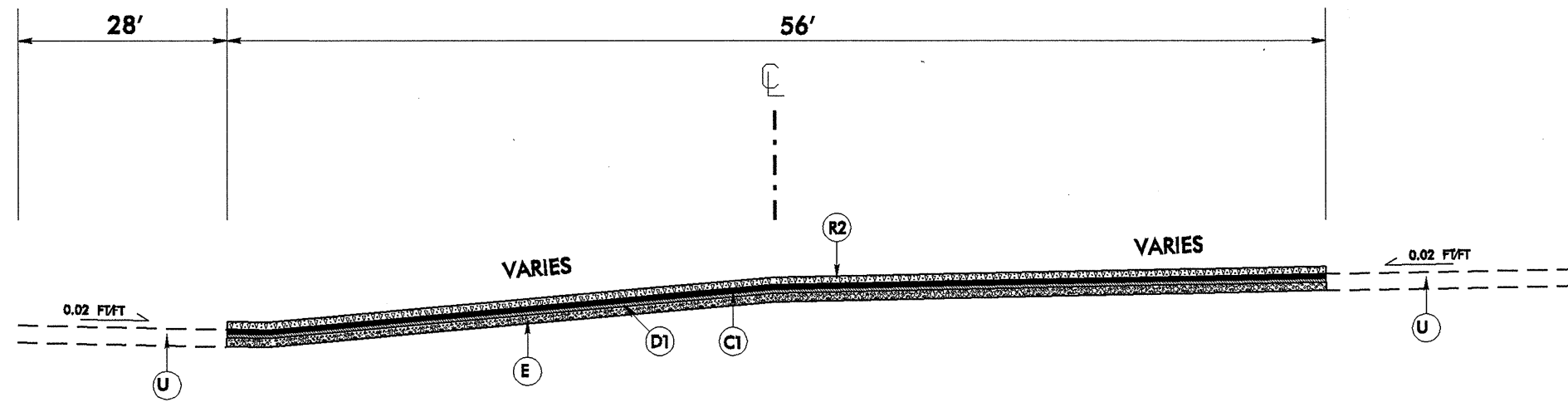
**TYPICAL SECTION NO. 11**  
 STA. -L- 643+23.57 TO STA. -L- 644+06.49  
 US 17

| PAVEMENT SCHEDULE |   |
|-------------------|---|
| C                 | PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 812.00, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.                       |
| C1                | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE 80.00, AT AN AVERAGE RATE OF 160 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. |
| C2                | PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 80.00, AT AN AVERAGE RATE OF 160 LBS. PER SQ. YD.                    |
| D                 | PROP. APPROX. 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.00, AT AN AVERAGE RATE OF 280 LBS. PER SQ. YD.                |
| D1                | PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.00, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.                  |
| D2                | PROP. APPROX. 2 1/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.00, AT AN AVERAGE RATE OF 280 LBS. PER SQ. YD.              |
| E                 | PROP. APPROX. 5/8" ASPHALT CONCRETE BASE COURSE, TYPE 820.00, AT AN AVERAGE RATE OF 227 LBS. PER SQ. YD.                        |
| R                 | EXISTING ASPHALT CURB.  |
| R1                | EXISTING MONOLITHIC CONCRETE ISLAND.  |
| R2                | 8" MONOLITHIC CONCRETE ISLAND.  |
| T                 | EARTH MATERIAL.   |
| U                 | EXISTING PAVEMENT.  |
| V                 | MILLING ASPHALT PAVEMENT 4 1/2" DEPTH.  |
| V1                | MILLING ASPHALT PAVEMENT 3 1/2" DEPTH.  |

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| WBS ELEMENT  | SHEET 15 OF 29 |
| 3CR.10651.53 |                |
| 3CR.10101.53 |                |
| 41380.3      |                |
| 3CR.20101.53 |                |
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**TYPICAL SECTION NO. 12**  
 STA. -L- 644+06.49 TO STA. -L- 644+93.43  
 US 17



**TYPICAL SECTION NO. 13**  
 STA. -L- 644+93.43 TO STA. -L- 645+08.49  
 US 17

\*SEE SHEET 7, DETAIL 3 FOR ACTUAL 5" CONCRETE ISLAND WIDTHS\*

| PAVEMENT SCHEDULE |   |
|-------------------|---|
| C                 | PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 612.00, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.                       |
| C1                | PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE 80.00, AT AN AVERAGE RATE OF 188 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. |
| C2                | PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 80.00, AT AN AVERAGE RATE OF 188 LBS. PER SQ. YD.                    |
| D                 | PROP. APPROX. 3 1/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 110.00, AT AN AVERAGE RATE OF 288 LBS. PER SQ. YD.              |
| D1                | PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 110.00, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.                  |
| D2                | PROP. APPROX. 3 1/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 110.00, AT AN AVERAGE RATE OF 288 LBS. PER SQ. YD.              |
| E                 | PROP. APPROX. 3 1/4" ASPHALT CONCRETE BASE COURSE, TYPE 225.00, AT AN AVERAGE RATE OF 927 LBS. PER SQ. YD.                      |
| R                 | EXISTING ASPHALT CURB.  |
| R1                | EXISTING MONOLITHIC CONCRETE ISLAND.  |
| R2                | 8" MONOLITHIC CONCRETE ISLAND.  |
| T                 | EARTH MATERIAL.   |
| U                 | EXISTING PAVEMENT.  |
| V                 | MILLING ASPHALT PAVEMENT 4 1/2" DEPTH.  |
| V1                | MILLING ASPHALT PAVEMENT 6 1/2" DEPTH.  |

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| WBS ELEMENT  | SHEET 16 OF 29 |
|--------------|----------------|
| 3CR.10651.53 |                |
| 3CR.10101.53 |                |
| 41380.3      |                |
| 3CR.20101.53 |                |
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630



BEGINNING OF PROJECT  
POT -L- Sta. 627+00.00

627+00

633+00

R/W

R/W

15° CMP

30° RCP

US 17 SBL

N 79° 10' 29.0" E

44'

47'

28'

-L- STA. 631+90.51  
58.49 RT

12'

37'

Rock Inlet  
Sediment Trap,  
Type C

US 17 NBL

BEGIN WIDENING  
-L- STA. 628+30.09  
68.49 RT

30° RCP

15° CMP

R/W

R/W

R/W

| DATUM DESCRIPTION   |               |               |                    |           |
|---|---------------|---------------|--------------------|-----------|
| THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON ASSUMED COORDINATES FOR CONTROL POINTS 1 & 2. ELEVATIONS ARE ALSO ASSUMED. |               |               |                    |           |
| # 1-NORTHING:   | 75166.9696 ft | EASTING:      | 2168112.3966 ft    |           |
| # 1-ELEVATION:  | 100.0000 ft   |               |                    |           |
| # 2-NORTHING:   | 75241.1924 ft | EASTING:      | 2168494.2397 ft    |           |
| # 2-ELEVATION:  | 98.0860 ft    |               |                    |           |
| CHAIN -L- DESCRIPTION:  |               |               |                    |           |
| Point 2000  | N             | 74.829.1658 E | 2,166.477.9787 Sta | 627+00.00 |
| Course from 2000 to 2001 N 79° 10' 29" E Dist 932.0199  |               |               |                    |           |
| Point 2001  | N             | 75.004.2128 E | 2,167.393.4128 Sta | 636+32.02 |
| Course from 2001 to 2002 N 79° 19' 25" E Dist 1,267.9756  |               |               |                    |           |
| Point 2002  | N             | 75.239.1201 E | 2,168.639.4388 Sta | 649+00.00 |
| LOCALIZED HORIZONTAL GROUND DISTANCE FROM CONTROL POINT #1 TO -L- STATION 627+00.00 IS 1668.9618.   |               |               |                    |           |
| ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES.   |               |               |                    |           |

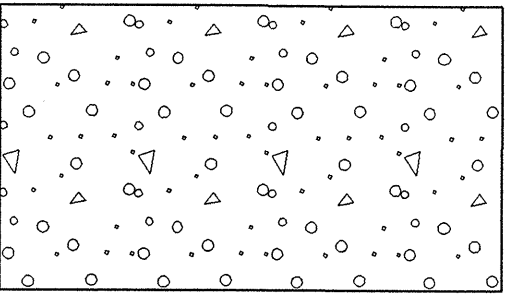
\*\*PARCEL (R/W) LINES ARE BASED ON TAX MAPS\*\*

REVISIONS

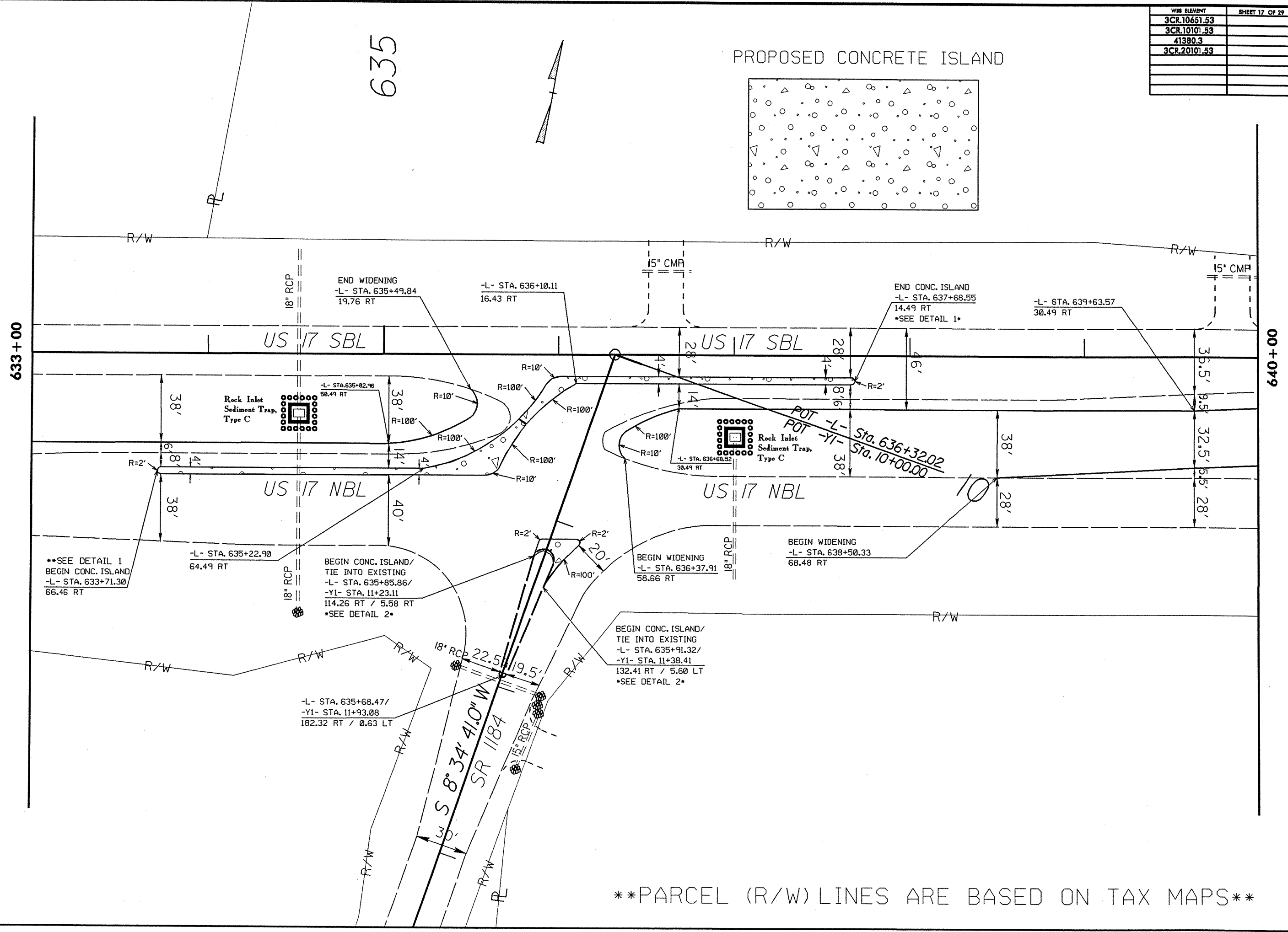
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| WBS ELEMENT  | SHEET 17 OF 27 |
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| 3CR.10101.53 |                |
| 41380.3      |                |
| 3CR.20101.53 |                |
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PROPOSED CONCRETE ISLAND



635



\*\*PARCEL (R/W) LINES ARE BASED ON TAX MAPS\*\*

REVISIONS

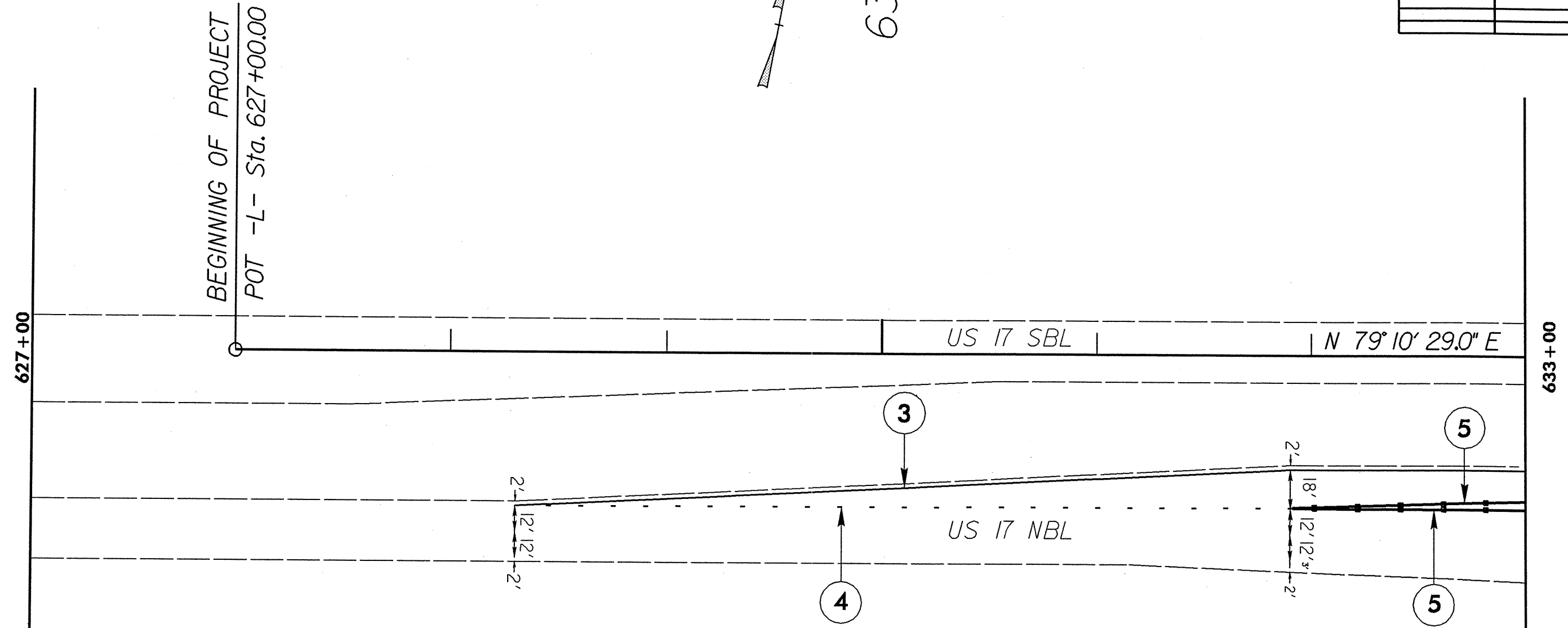
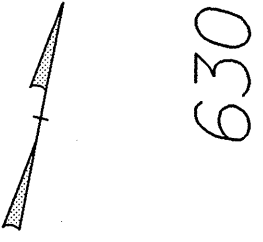
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| WBS ELEMENT  | SHEET 19 OF 29 |
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| 3CR.10101.53 |                |
| 41380.3      |                |
| 3CR.20101.53 |                |
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| THERMO-PLASTIC MARKING LINES |                                      |
|------------------------------|--------------------------------------|
| 1-----                       | 4" SOLID WHITE 90mil                 |
| 2-----                       | 4" SOLID WHITE 120mil                |
| 3-----                       | 4" SOLID YELLOW 90mil                |
| 4-----                       | 4" X 2' X 13' WHITE MINI-SKIP 120mil |
| 5-----                       | 8" SOLID WHITE GORE 90mil            |

| PAINT PAVEMENT MARKING LINES |                          |
|------------------------------|--------------------------|
| 6-----                       | 24" SOLID WHITE STOP BAR |

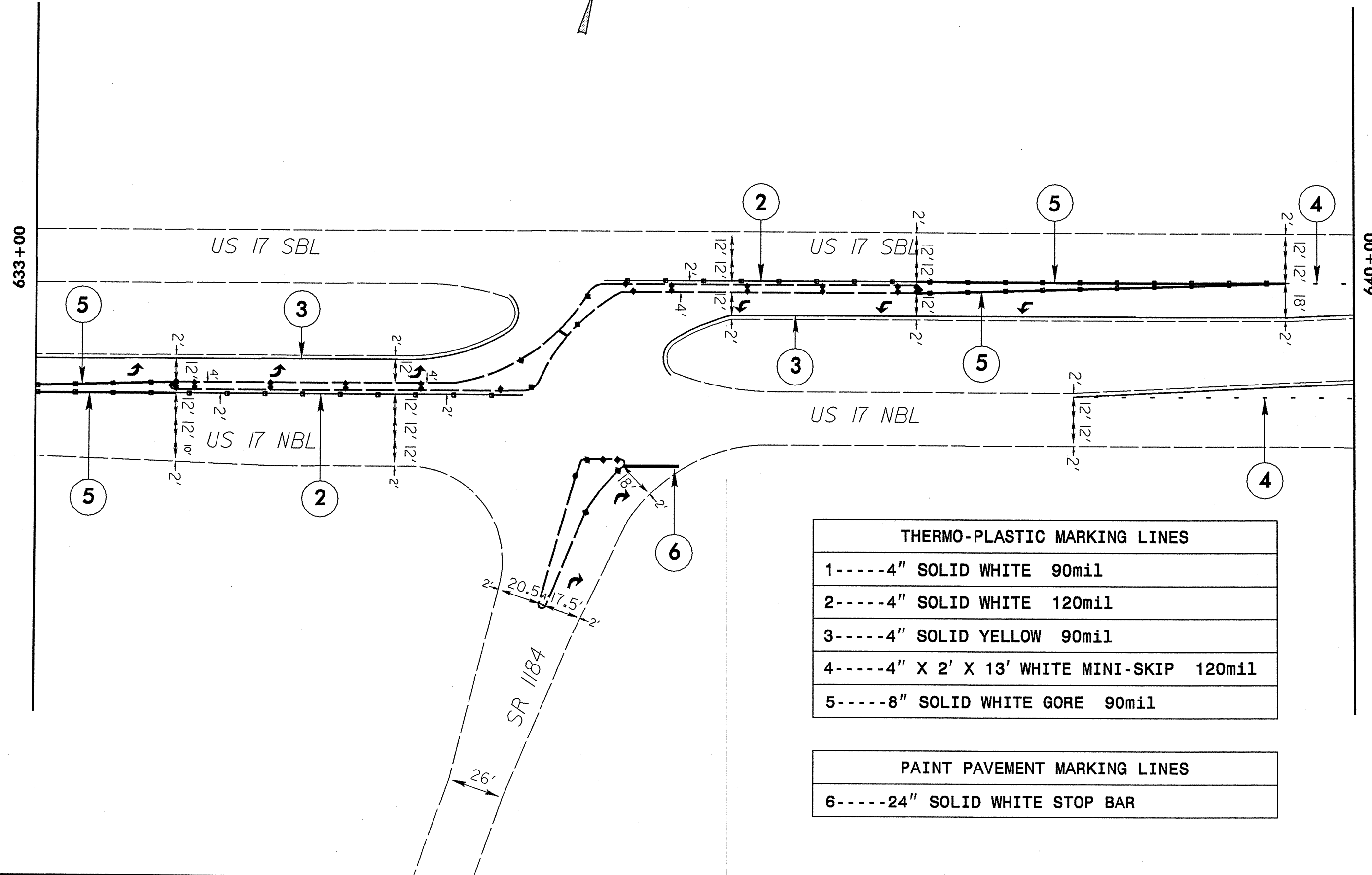
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| WBS ELEMENT  | SHEET 20 OF 29 |
|--------------|----------------|
| 3CR.10661.53 |                |
| 3CR.10101.53 |                |
| 41380.3      |                |
| 3CR.20101.53 |                |
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8/17/09

REVISIONS



| THERMO-PLASTIC MARKING LINES |                                      |
|------------------------------|--------------------------------------|
| 1-----                       | 4" SOLID WHITE 90mil                 |
| 2-----                       | 4" SOLID WHITE 120mil                |
| 3-----                       | 4" SOLID YELLOW 90mil                |
| 4-----                       | 4" X 2' X 13' WHITE MINI-SKIP 120mil |
| 5-----                       | 8" SOLID WHITE GORE 90mil            |

| PAINT PAVEMENT MARKING LINES |                          |
|------------------------------|--------------------------|
| 6-----                       | 24" SOLID WHITE STOP BAR |

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|--------------|----------------|
| WBS ELEMENT  | SHEET 21 OF 27 |
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| 3CR.10101.53 |                |
| 41380.3      |                |
| 3CR.20101.53 |                |

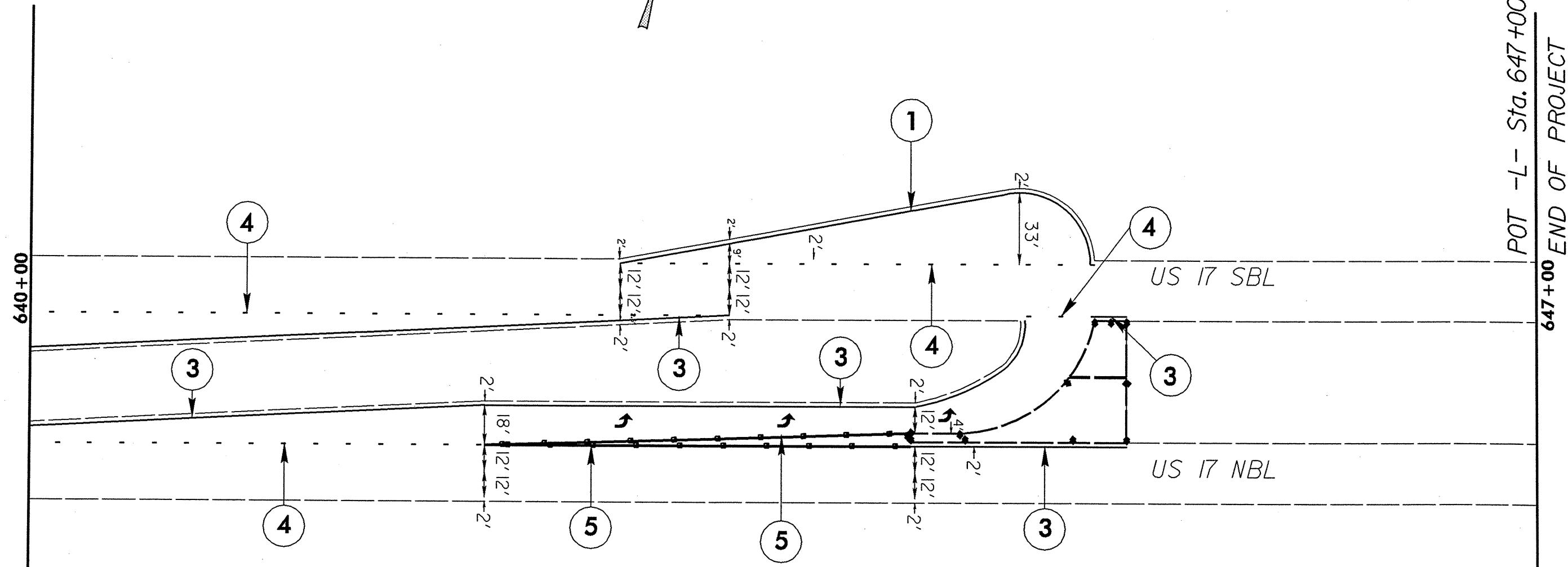
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REVISIONS

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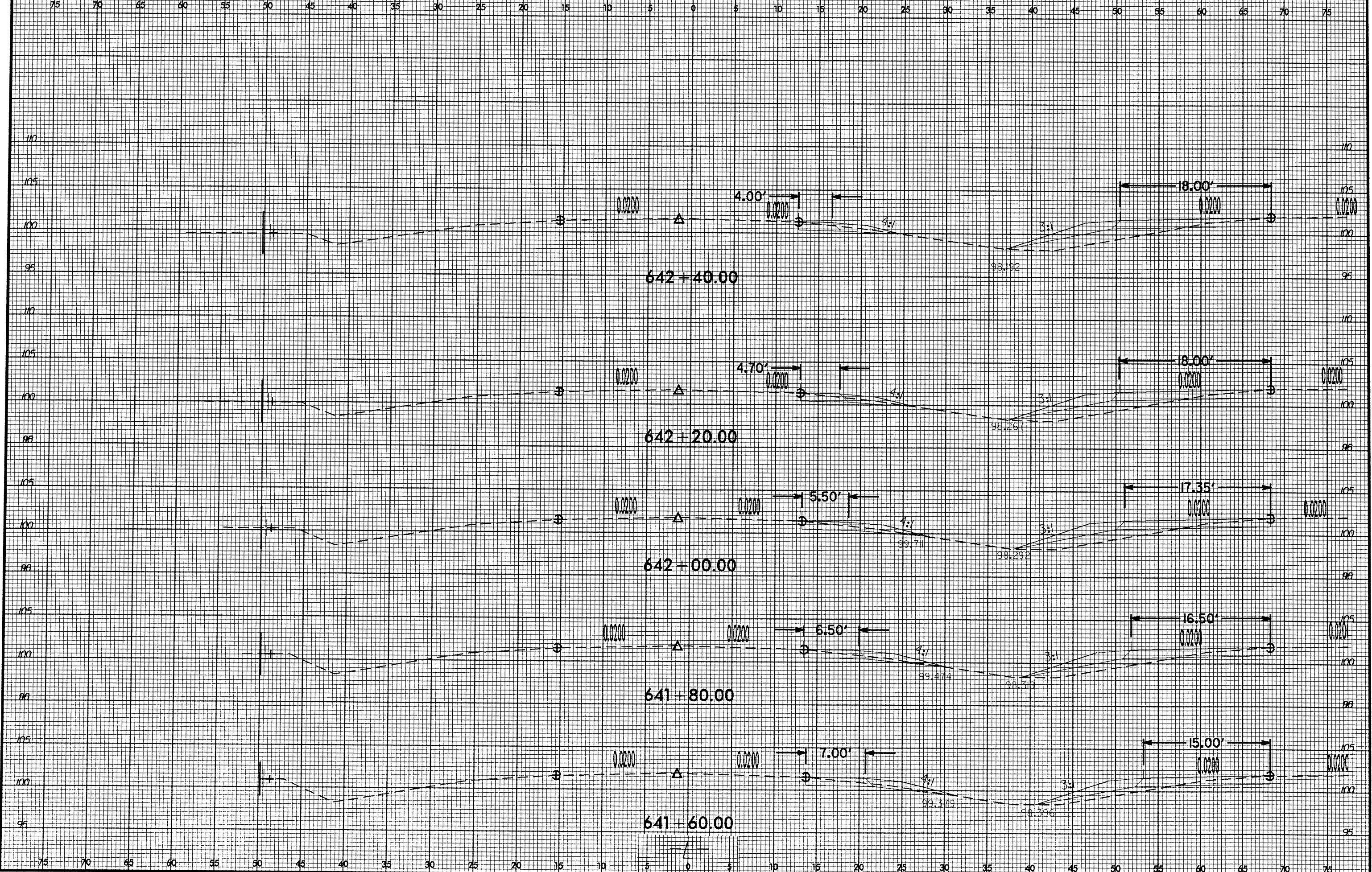


POT -L- Sta. 647+00.00  
 647+00 END OF PROJECT

| THERMO-PLASTIC MARKING LINES |                                      |
|------------------------------|--------------------------------------|
| 1-----                       | 4" SOLID WHITE 90mil                 |
| 2-----                       | 4" SOLID WHITE 120mil                |
| 3-----                       | 4" SOLID YELLOW 90mil                |
| 4-----                       | 4" X 2' X 13' WHITE MINI-SKIP 120mil |
| 5-----                       | 8" SOLID WHITE GORE 90mil            |

| PAINT PAVEMENT MARKING LINES |                          |
|------------------------------|--------------------------|
| 6-----                       | 24" SOLID WHITE STOP BAR |

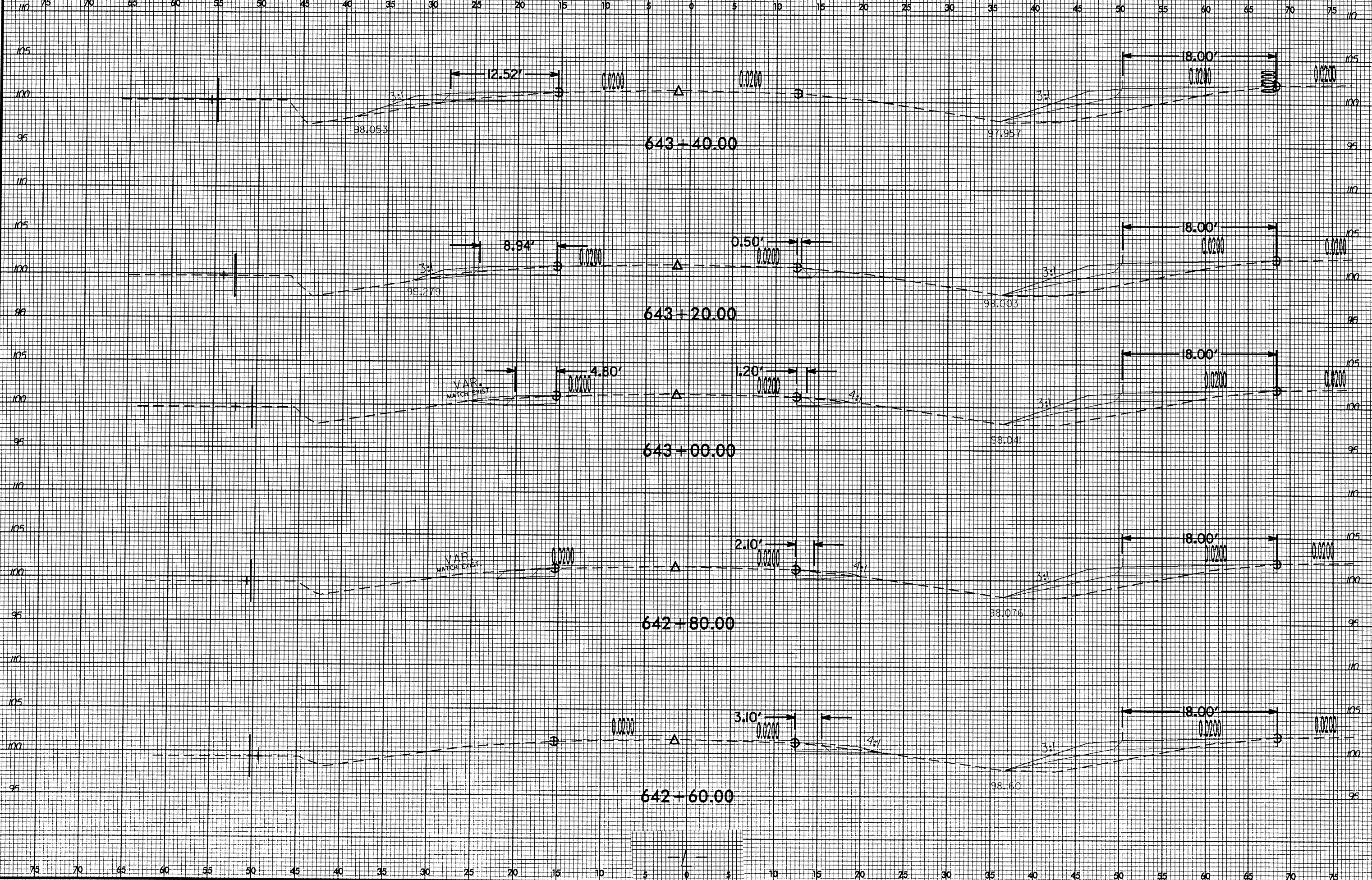
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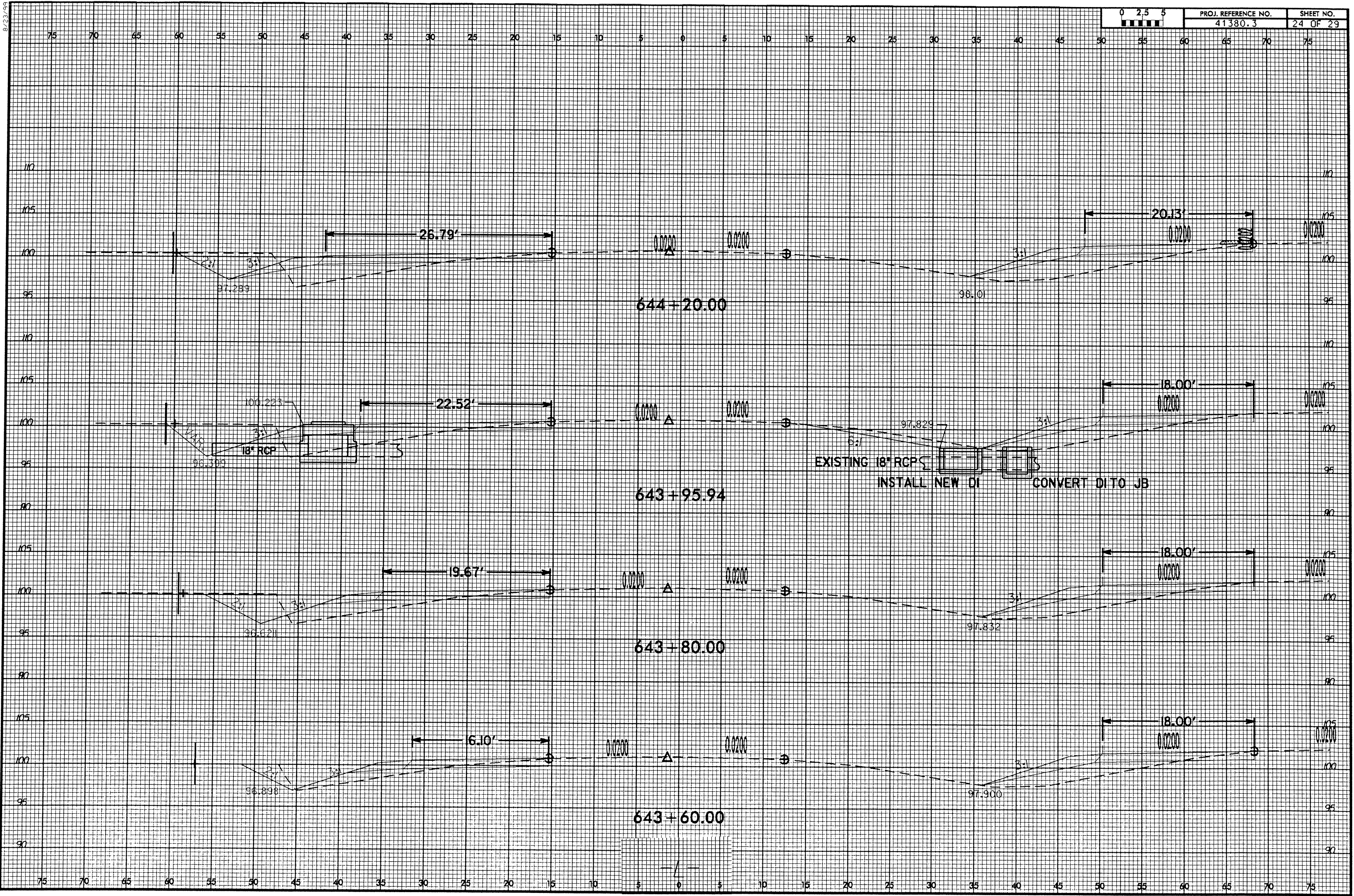


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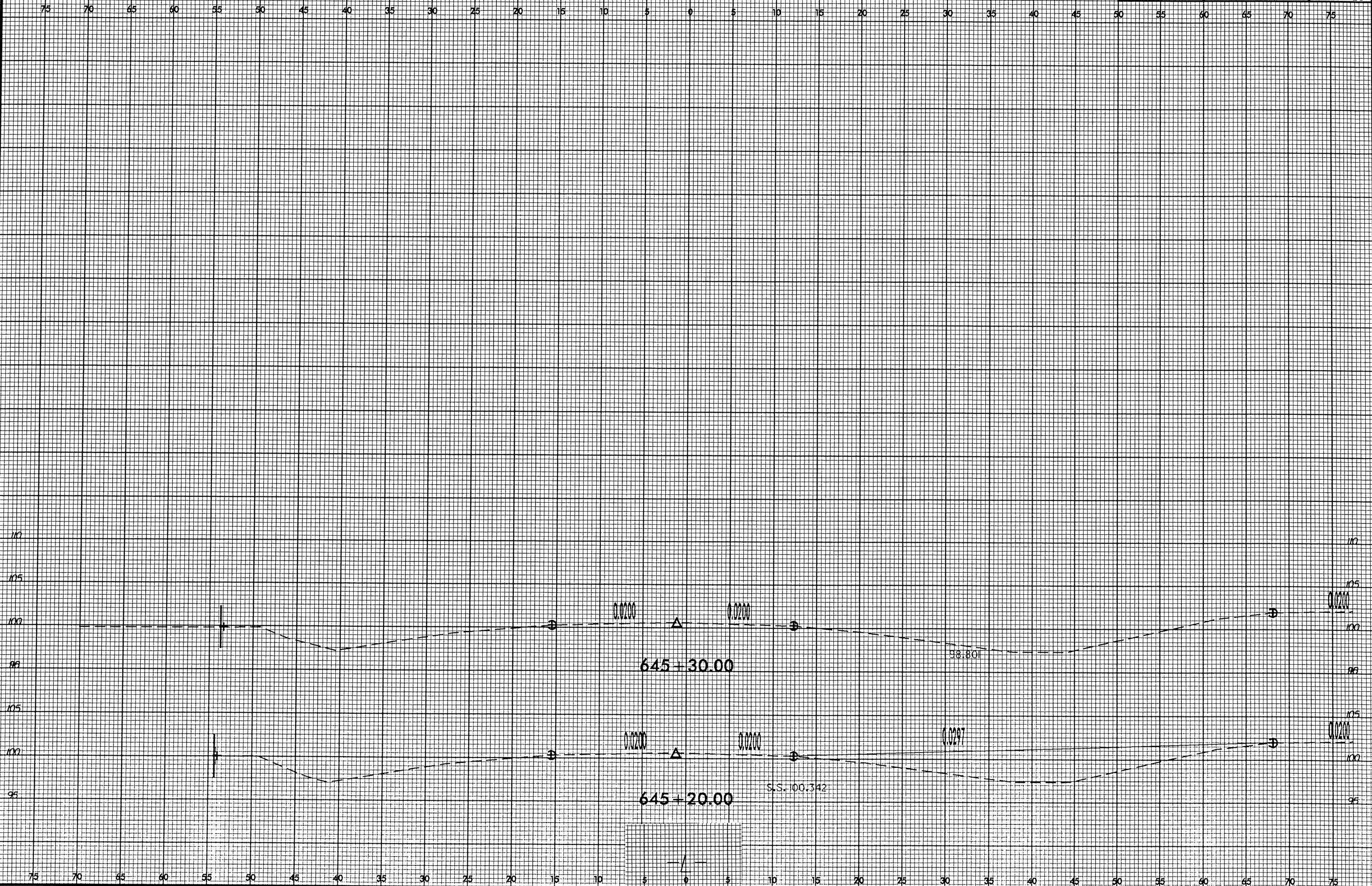
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



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|--------------|----------------|
| WBS ELEMENT  | SHEET 27 OF 29 |
| 3CR.10651.53 |                |
| 3CR.10101.53 |                |
| 41380.3      |                |
| 3CR.20101.53 |                |
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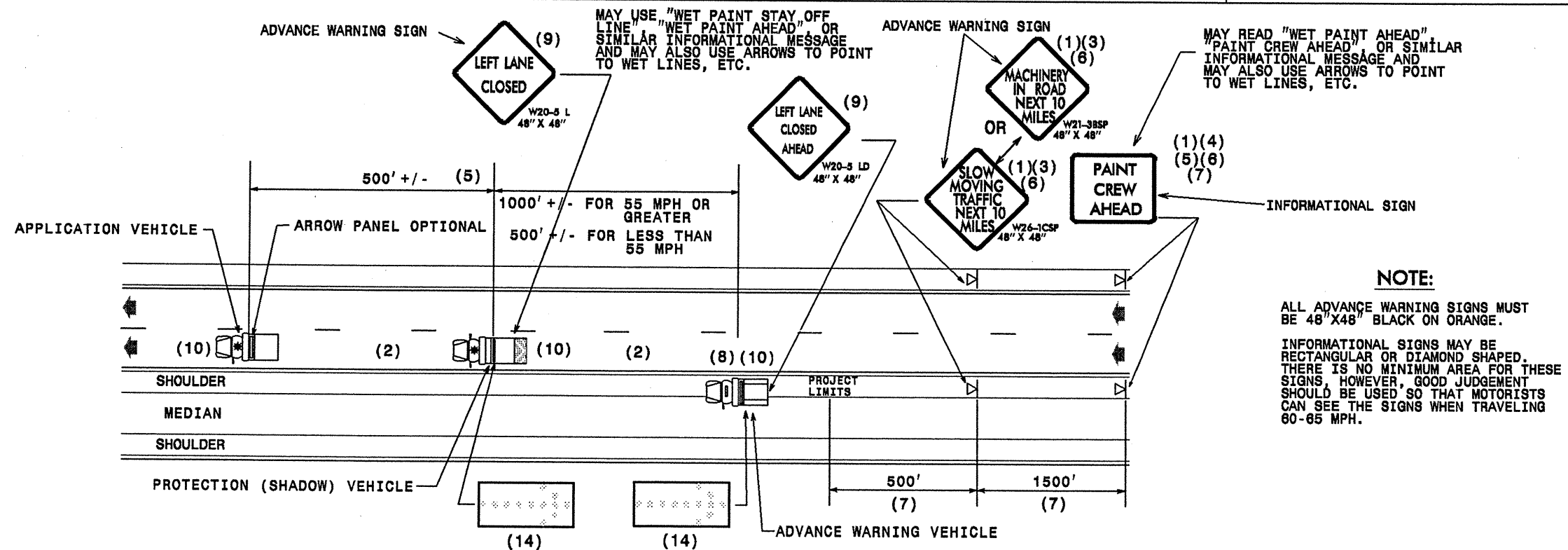
### GENERAL NOTES

- (1) THE FOLLOWING OPTIONS MAY BE USED FOR ADVANCE WARNING SIGNS:
  - A. TRUCK MOUNTED ADVANCE WARNING SIGNS
  - B. TRUCK MOUNTED CHANGEABLE MESSAGE SIGN (CMS)
  - C. GROUND MOUNTED ADVANCE WARNING SIGNS  
(MUST USE 'NEXT 10 MILES' AND CIRCLE TO PICK UP SIGNS)
  - D. GROUND MOUNTED CHANGEABLE MESSAGE SIGN (CMS)  
(MUST USE 'NEXT 10 MILES' AND CIRCLE TO PICK UP CMS)
- (2) ADDITIONAL VEHICLES SHOULD BE USED IN WORK CARAVAN TO FACILITATE DRYING OF PAVEMENT MARKING MATERIAL - TMIA'S ARE OPTIONAL ON THESE ADDITIONAL VEHICLES. HOWEVER, THE FIRST VEHICLE MOTORISTS SEE SHOULD HAVE A TMIA.
- (3) ROUND UP MILEAGE TO NEXT WHOLE MILE. WORK ZONE SHOULD NOT EXCEED TEN (10) MILES IN LENGTH.
- (4) SIGNS SHOULD BE ACTIVITY SPECIFIC I.E., PAINT CREW AHEAD (W21-001 C 48"X48")
- (5) DISTANCE BETWEEN APPLICATION VEHICLE AND PROTECTION VEHICLE WILL VARY AS DRYING TIMES VARY, HOWEVER, THE CRITICAL FACTOR IS PASSING MOTORISTS. IF THE GAP BETWEEN VEHICLES IS TOO GREAT, MOTORISTS WILL ATTEMPT TO PASS AND ULTIMATELY APPEAR IN THE MIDDLE OF THE OPERATION.
- (6) MOUNTING HEIGHT DIMENSIONS FROM ROADWAY TO SIGN SHOULD BE A MINIMUM OF FIVE (5) FEET FOR INTERSTATES, OTHER HIGH VOLUME ROADWAYS, OR ROADWAYS THAT MAY REQUIRE A MOUNTING HEIGHT OF FIVE (5) FEET FOR INCREASED VISIBILITY AND A MINIMUM OF ONE (1) FOOT FOR ALL OTHER ROADWAYS.
- (7) SIGN SPACING SHOULD BE ADJUSTED FOR HORIZONTAL AND VERTICAL CURVES, ETC. TO IMPROVE SIGHT DISTANCES.
- (8) USE AN ADVANCE WARNING VEHICLE(S) WITH FLASHING ARROW PANELS ON SHOULDERS TO SUPPLEMENT TRAFFIC SHIFTS. USE OF CMS ON THIS VEHICLE(S) IS OPTIONAL.
- (9) SIGN W20-5L SHOULD BE PLACED ON BACK OF PROTECTION VEHICLE AND SIGN W20-5LD ON BACK OF ADVANCE WARNING VEHICLE IN MULTILANE DIVIDED TRAFFIC SO VEHICLES APPROACHING FROM REAR ARE NOTIFIED OF OPERATION.
- (10) RADIO COMMUNICATION BETWEEN VEHICLES IS RECOMMENDED.
- (11) USE OF A LIGHT BAR ON THE ADVANCE WARNING VEHICLE IS PREFERRED, BUT A ROTATING BEACON MAY BE USED INSTEAD.
- (12) USE OF A CMS ON ADVANCED WARNING VEHICLES IS OPTIONAL.
- (13) IF WORK IS PERFORMED AT NIGHT, THE FOLLOWING PROVISIONS MUST BE MADE:
  - A. GROUND MOUNTED SIGNS MUST HAVE TYPE B FLASHING LIGHTS ATTACHED (TRUCK MOUNTED SIGNS DO NOT REQUIRE TYPE B FLASHING LIGHTS)
  - B. OPERATION MUST INCLUDE A CHANGEABLE MESSAGE SIGN (CMS)
  - C. WORK AREA MUST BE ILLUMINATED WITH MACHINE AND/OR TOWER LIGHTS AS APPROVED BY THE ENGINEER.
- (14) USE A TYPE "B" FLASHING ARROW PANEL.

| PANEL TYPE | MIN. SIZE |
|------------|-----------|
| B          | 60"X30"   |

### LEGEND

-  PORTABLE SIGN
-  DIRECTION OF TRAFFIC FLOW
-  APPLICATION VEHICLE WITH ROTATING BEACON
-  PROTECTION VEHICLE WITH TRUCK MOUNTED IMPACT ATTENUATOR (TMIA) AND ROTATING BEACON (SEE ROADWAY STANDARD NO. 1166.01)
-  ADVANCE WARNING VEHICLE I.E. PICKUP TRUCK WITH MOUNTED SIGN
-  FLASHING ARROW PANEL, TYPE "B" APPROPRIATE DIRECTION INDICATED

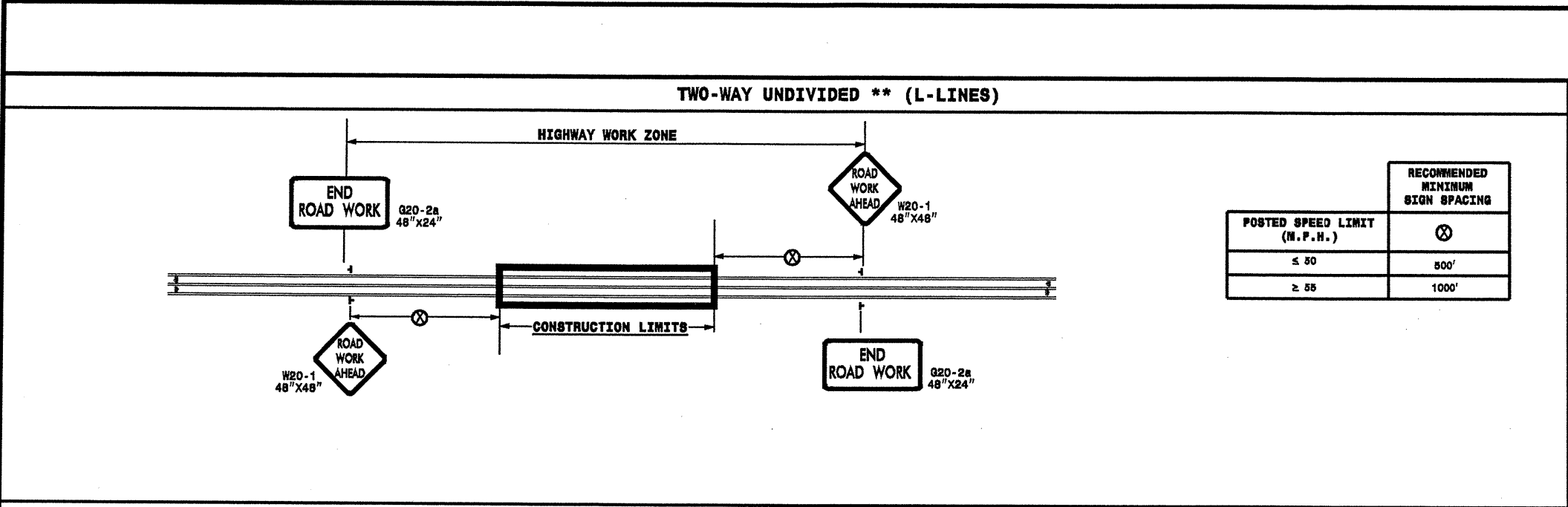


## MOVING OPERATION CARAVAN

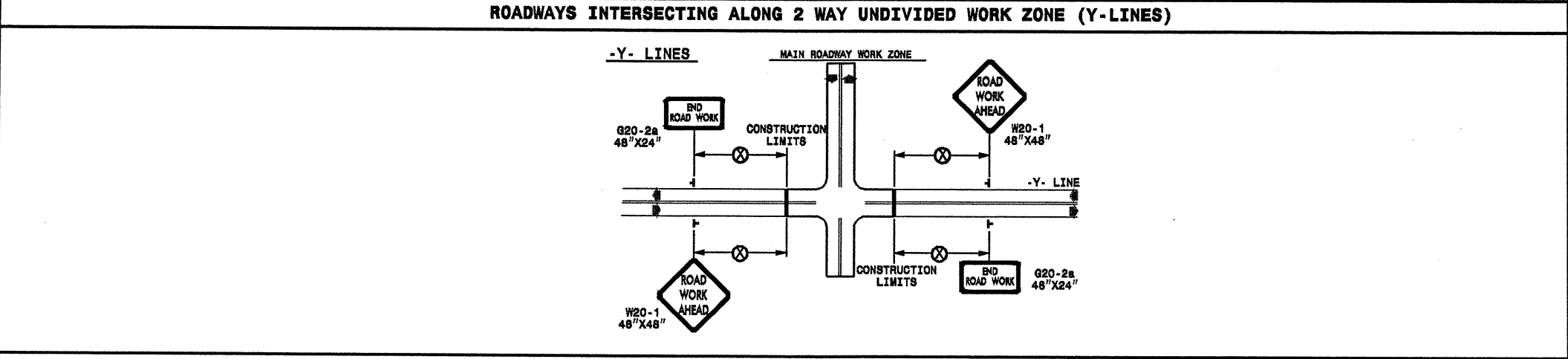
(OPERATIONS TRAVELING 3 MPH OR FASTER)  
PLACING PAVEMENT MARKING OR MARKERS ON INTERSTATE & MULTILANE DIVIDED ROADWAYS

**DRAWING NUMBER 7**  
IMPLEMENTATION DATE: 07/01/97  
REVISED: 04/25/97

|              |                |
|--------------|----------------|
| WBS ELEMENT  | SHEET 28 OF 29 |
| 3CR.10451.53 |                |
| 3CR.10101.53 |                |
| 41380.3      |                |
| 3CR.20101.53 |                |
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STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.



DETAIL DRAWING FOR  
TWO-WAY UNDIVIDED  
WORK ZONE WARNING SIGNS

**GENERAL NOTES**

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.
- \*\* TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

**LEGEND**

|   |                           |
|---|---------------------------|
| ⊥ | STATIONARY SIGN           |
| → | DIRECTION OF TRAFFIC FLOW |

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

SEAL

**DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS**

|                    |  |
|--------------------|--|
| SCALE: NONE        |  |
| DATE: _____        |  |
| DWG. BY: _____     |  |
| REVIEWED BY: _____ |  |

| REVISIONS |       |
|-----------|-------|
| 7-98      | 10/01 |
| 10-98     | 03/04 |
| 01/01     | 11/04 |

SHEET 1 OF 1

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casch@dot.nc.gov

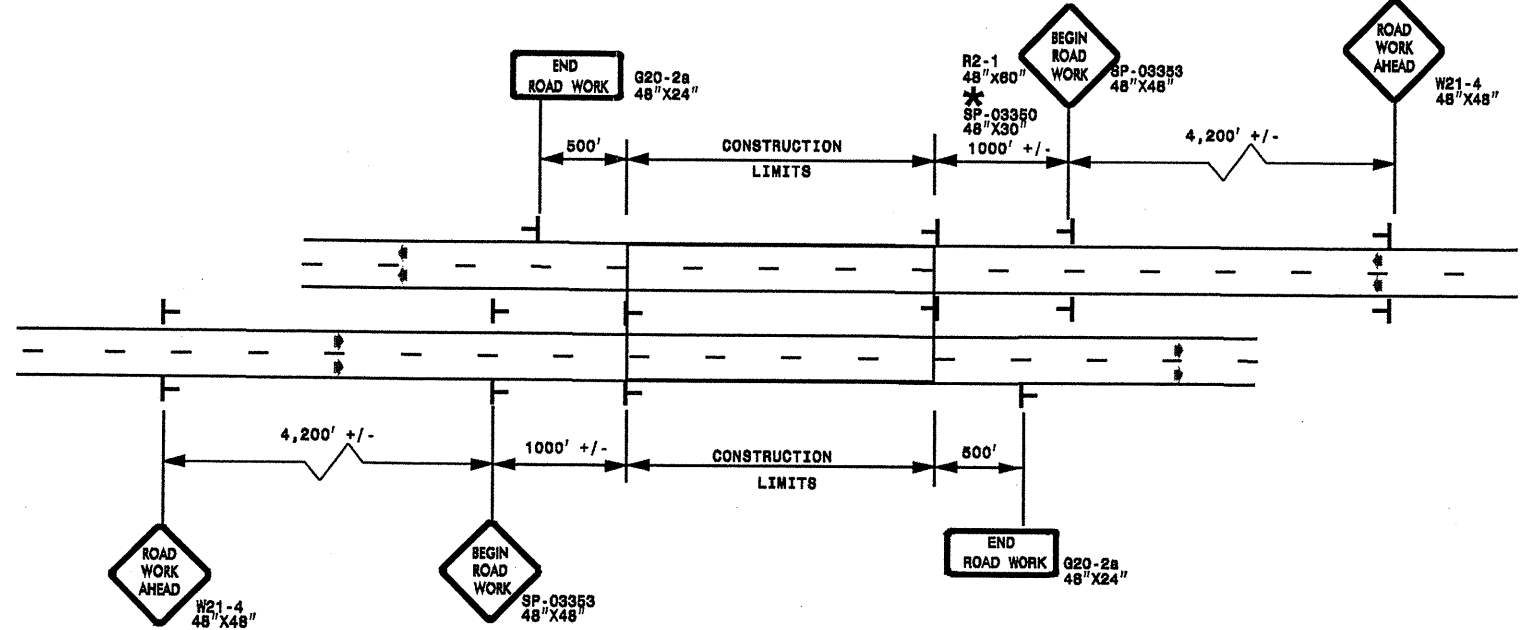
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| WBS ELEMENT  | SHEET 29 OF 29 |
| 3CR.10651.53 |                |
| 3CR.10101.53 |                |
| 41380.3      |                |
| 3CR.20101.53 |                |
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## ADVANCED WORK ZONE WARNING SIGNING FOR FREEWAYS (4 LANES OR GREATER)

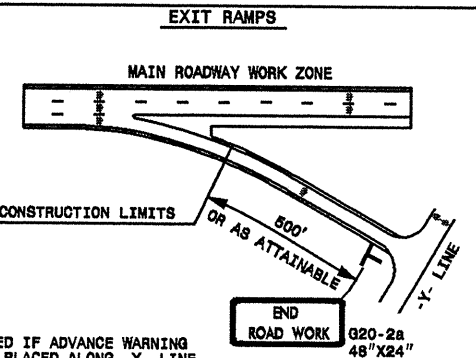
### DETAIL A



| LEGEND |                           |
|--------|---------------------------|
| —      | STATIONARY SIGN           |
| →      | DIRECTION OF TRAFFIC FLOW |

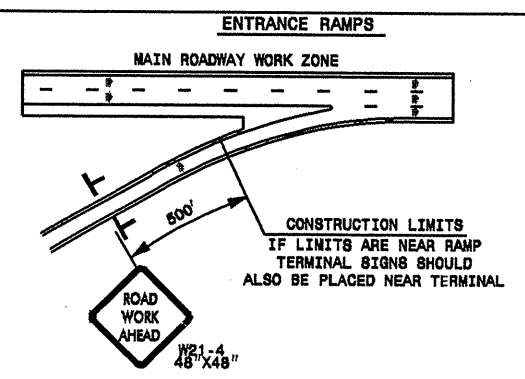
\* USE THE "\$250 SPEEDING PENALTY" SIGN, SPEED LIMIT SIGN, AND ORANGE PANEL; ONLY WHEN A "\$250 SPEEDING PENALTY" ORDINANCE HAS BEEN ISSUED BY THE REGIONAL TRAFFIC ENGINEER.

### DETAIL B

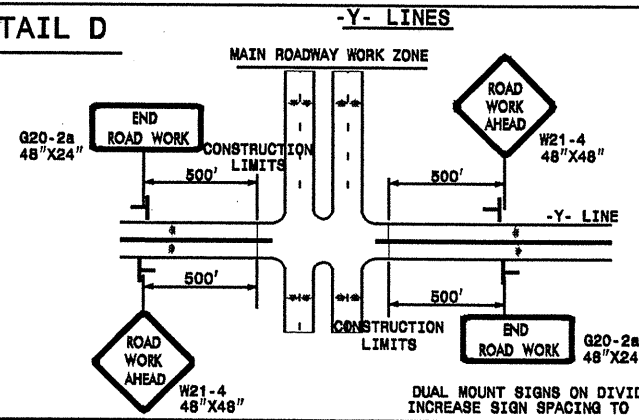


NOTE: SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

### DETAIL C



### DETAIL D

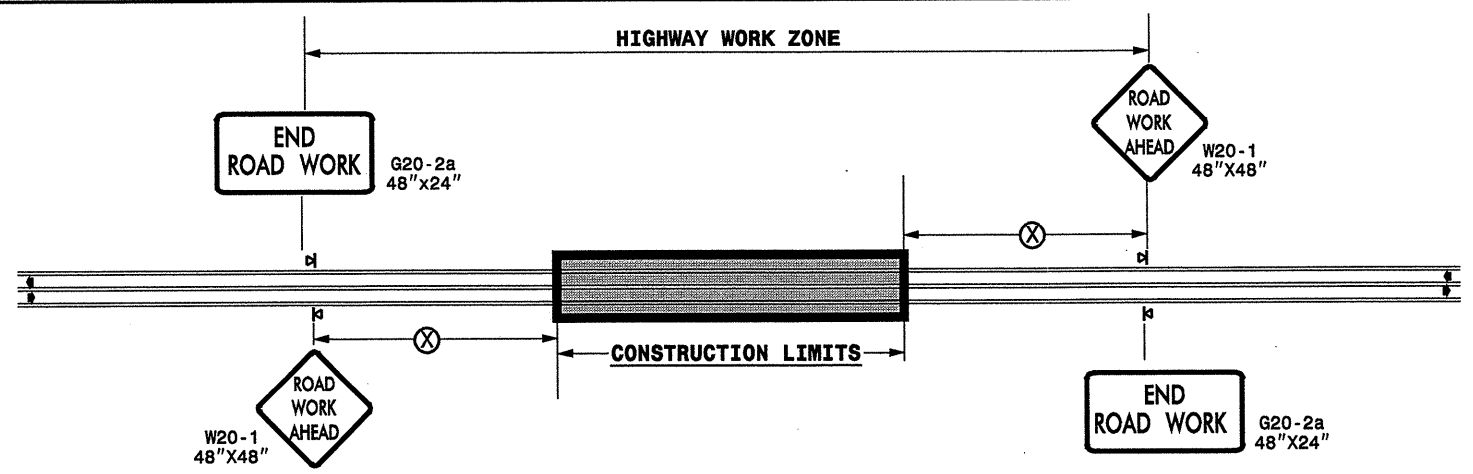


### GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

|                             |   |           |
|-----------------------------|---|-----------|
| APPROVED: _____ DATE: _____ | <b>ADVANCED WORK ZONE WARNING SIGNS<br/>FOR FREEWAYS (4 LANES OR GREATER)</b> |           |
| SEAL                        | SCALE: NONE   | REVISIONS |
|                             | DATE: 8/03  | 03/04     |
|                             | DWG. BY: JI   |           |
|                             | DESIGN BY: JI   |           |
| REVIEWED BY:                |   |           |

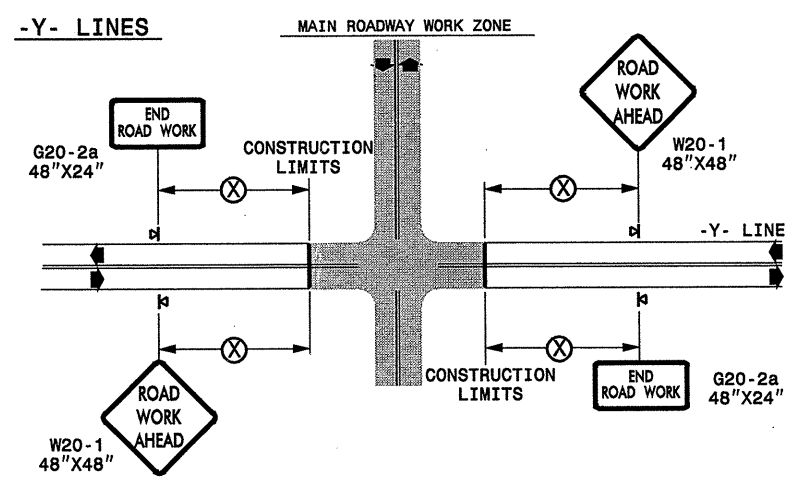
**TWO-WAY UNDIVIDED \*\* (L-LINES)**



| POSTED SPEED LIMIT (M.P.H.) | RECOMMENDED MINIMUM SIGN SPACING |
|-----------------------------|----------------------------------|
| ≤ 50                        | 500'                             |
| ≥ 55                        | 1000'                            |

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

**ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)**



DETAIL DRAWING  
FOR TWO-WAY UNDIVIDED  
WORK ZONE WARNING SIGNS

**GENERAL NOTES**

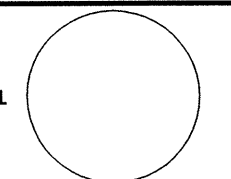


- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE PORTABLE WORK ZONE SIGNS ONLY WITH PORTABLE WORK ZONE SIGN STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER. PORTABLE WORK ZONE SIGNS MAY BE ROLL UP OR APPROVED COMPOSITE.
- PROVIDE PORTABLE WORK ZONE SIGN STANDS, PORTABLE SIGNS AND SIGN SHEETING WHICH ARE LISTED ON THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCT LIST OR ACCEPTED AS TRAFFIC QUALIFIED BY THE TRAFFIC CONTROL UNIT.
- \*\* TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

**LEGEND**

◁ PORTABLE SIGN

← DIRECTION OF TRAFFIC FLOW

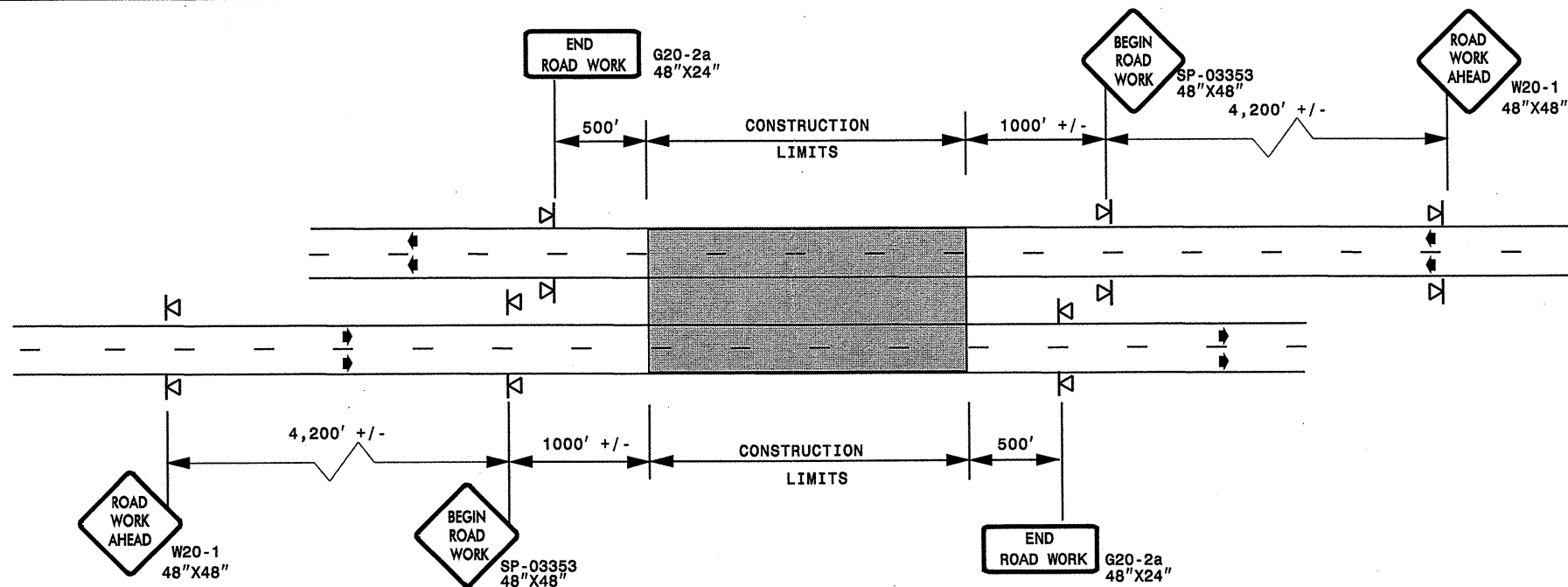
SHEET 1 OF 1

|  |   |   |           |
|--|---|---|-----------|
| APPROVED: _____ DATE: _____  | DETAIL DRAWING<br>FOR TWO-WAY UNDIVIDED<br>ADVANCED WORK ZONE WARNING SIGNS           | SCALE: NONE   | REVISIONS |
| SEAL  |   | DATE: 7-98 10/01  |           |
|  | DWG. BY: _____  | 10-98 03/04   |           |
|  | DESIGN BY: _____  | 01/01 11/04   |           |
| REVIEWED BY: _____   |  | CAD FILE<br> |           |

02-MAR-2008 19:50  
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 PSEYMORE AT WZTC237502

**ADVANCE WORK ZONE WARNING SIGNING FOR FREEWAYS (4 LANES OR GREATER)**

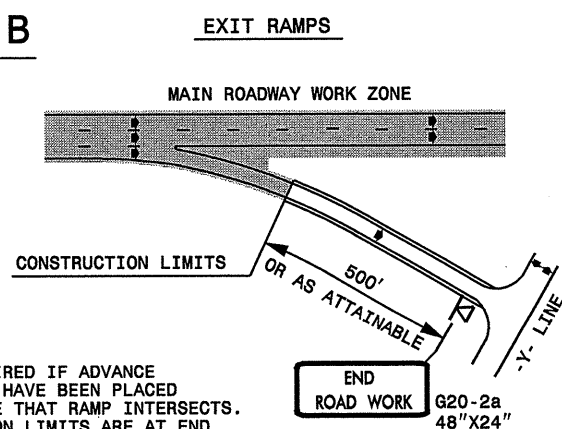
**DETAIL A**



STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

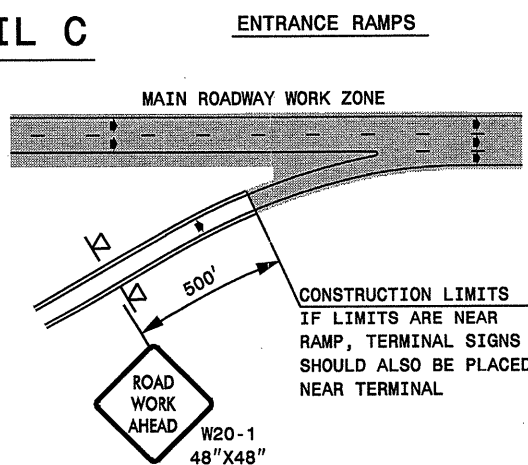
**ROADWAYS INTERSECTING ALONG FREEWAY WORK ZONE (Y-LINES)**

**DETAIL B**

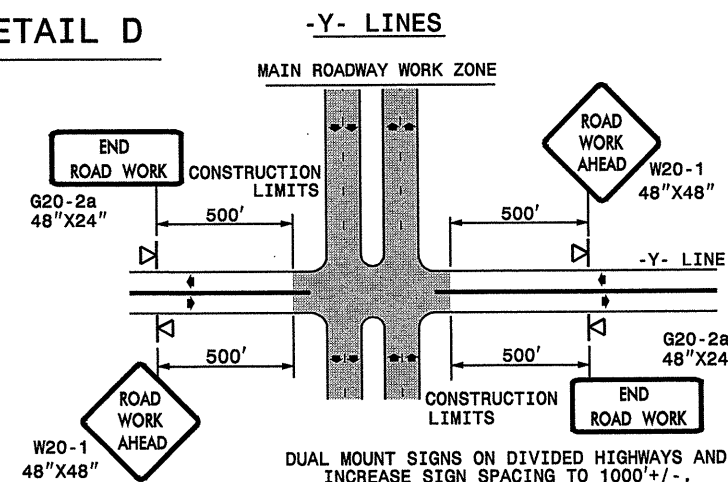


NOTE:  
SIGN NOT REQUIRED IF ADVANCE  
WARNING SIGNS HAVE BEEN PLACED  
ALONG -Y- LINE THAT RAMP INTERSECTS.  
IF CONSTRUCTION LIMITS ARE AT END  
OF RAMP, PLACE SIGN AT END OF RAMP.

**DETAIL C**



**DETAIL D**



DETAIL DRAWING  
FOR FREEWAYS  
WORK ZONE WARNING SIGNS  
(SHORT-DURATION LANE CLOSURES)

**GENERAL NOTES**

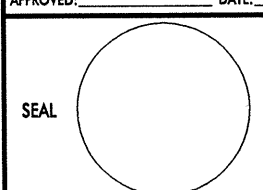

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCE WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE PORTABLE WORK ZONE SIGNS ONLY WITH PORTABLE WORK ZONE SIGN STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER. PORTABLE WORK ZONE SIGNS MAY BE ROLL UP OR APPROVED COMPOSITE.
- PROVIDE PORTABLE WORK ZONE SIGN STANDS, PORTABLE SIGNS AND SIGN SHEETING WHICH ARE LISTED ON THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCT LIST OR ACCEPTED AS TRAFFIC QUALIFIED BY THE TRAFFIC CONTROL UNIT.
- \*\* TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

**LEGEND**

◁ PORTABLE SIGN

➔ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

|   |   |   |       |
|---|---|---|-------|
| APPROVED: _____   | DATE: _____   | DETAIL DRAWING<br>FOR FREEWAYS<br>WORK ZONE WARNING SIGNS |       |
|  |   |   |       |
| SCALE: NONE   |  | REVISIONS   |       |
| DATE:   |   | 7-98  | 10/01 |
| DWG. BY:  |   | 10-98   | 03/04 |
| DESIGN BY:  |   | 01/01   | 11/04 |
| REVIEWED BY:  | CADD FILE   |   |       |

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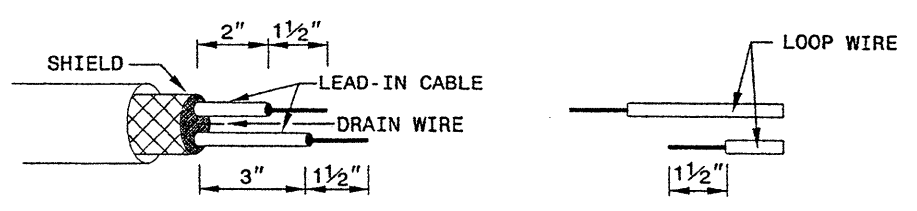
STATE OF  
NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

5-07

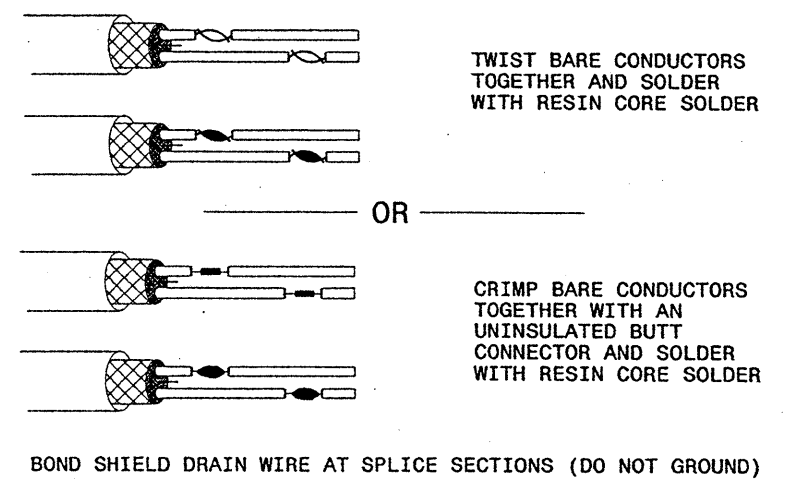
ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
SPlicing FOR LEAD-IN CABLE AND LOOP WIRE

SHEET 3 OF 3  
**1725D01**

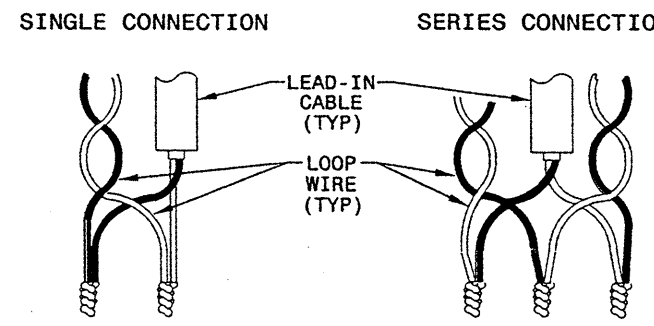
**STEP 1. STRIP LOOP WIRE AND LEAD-IN CABLE**



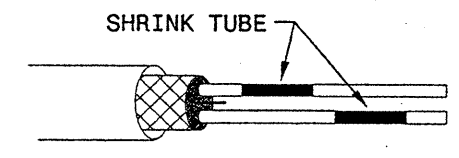
**STEP 2. CONNECT AND SOLDER**



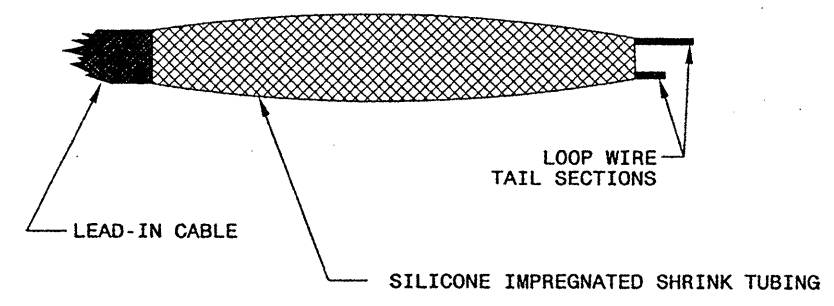
**LOOP WIRE AND LEAD-IN CABLE CONNECTION DETAILS**



**STEP 3. INSULATE EACH SOLDER JOINT SEPARATELY**



**STEP 4. ENVIRONMENTALLY PROTECT SPLICE**



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ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
SPlicing FOR LEAD-IN CABLE AND LOOP WIRE

SHEET 3 OF 3  
**1725D01**

See Plate for Title

Prepared in the Offices of:

750 N. Greenfield Parkway  
Garner, NC 27529

SEAL

Milton I. Dean 9/5/07  
SIGNATURE DATE

05-SEP-2007 14:01  
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