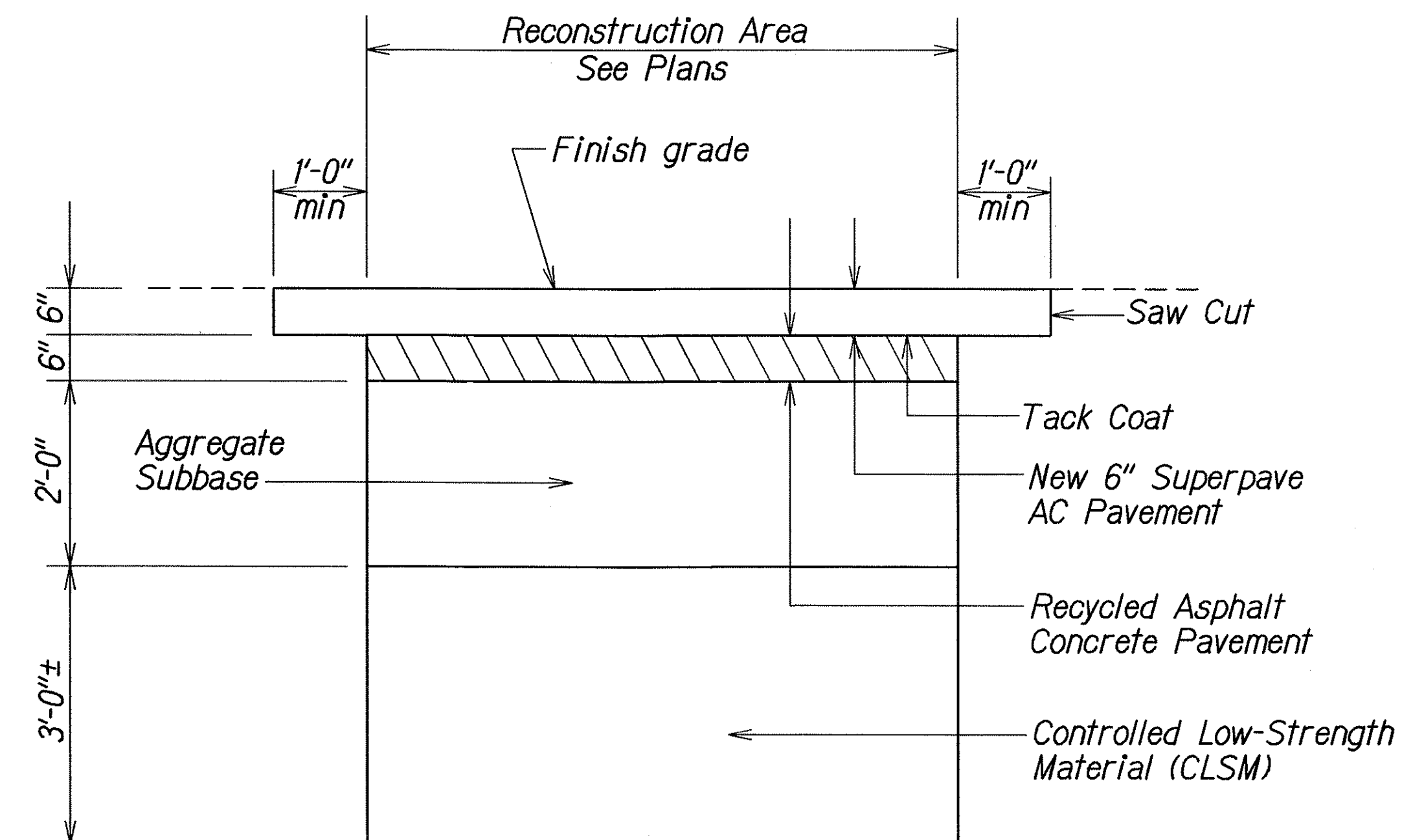


| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | IM-H3-1(80)        | 2006        | ADD.65    | 66           |

### DRAINAGE NOTES

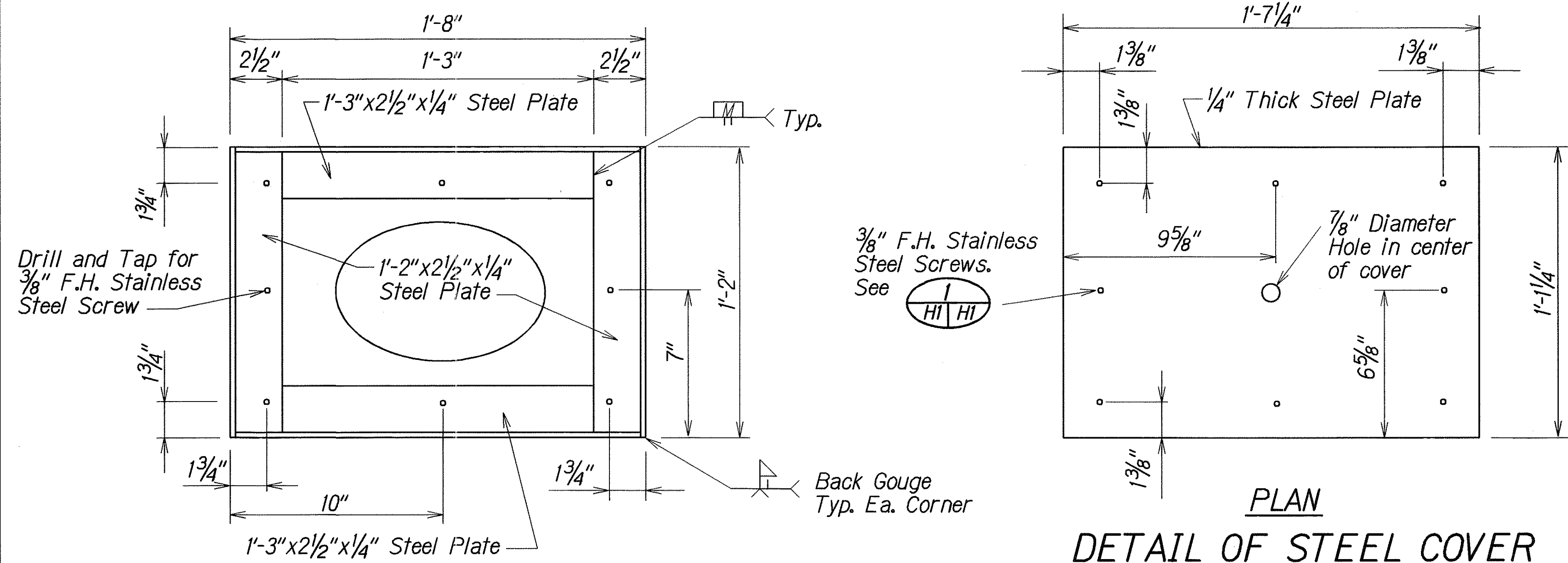
- Existing drainage systems will be functional at all times during construction. The Contractor is to furnish materials, equipment, labor, tools and incidentals necessary to accomplish maintenance of flow.
- The quantities for cleanouts are based on As-Built drawings. The Contractor shall verify the locations of all existing cleanouts in the field. Demolishing, removing, and disposing existing cleanouts shall not be paid for separately, but shall be considered incidental to Item No. 604.2000-Adjusting Cleanout Frame and Cover.
- Any existing underdrains damaged during construction shall be replaced by the Contractor at his own expense.



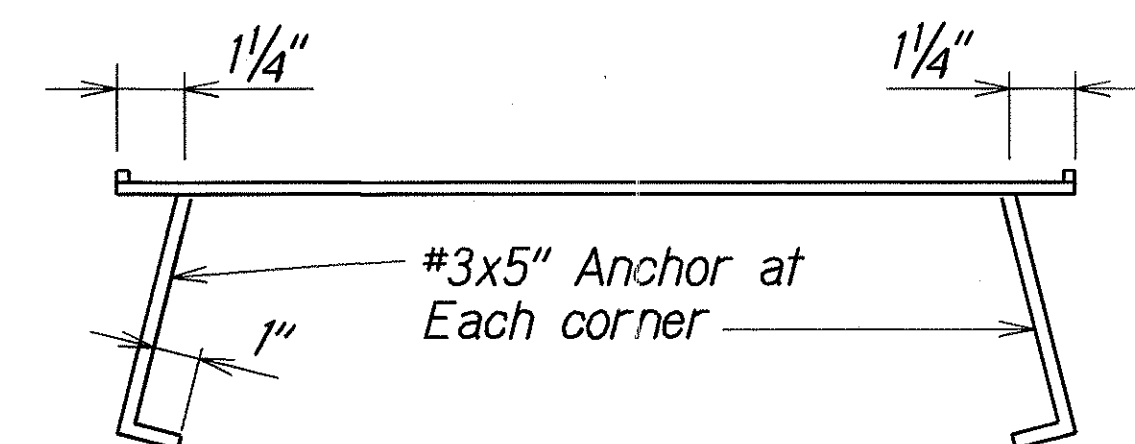
### PAVEMENT RECONSTRUCTION

Scale: 3/4"=1'-0"

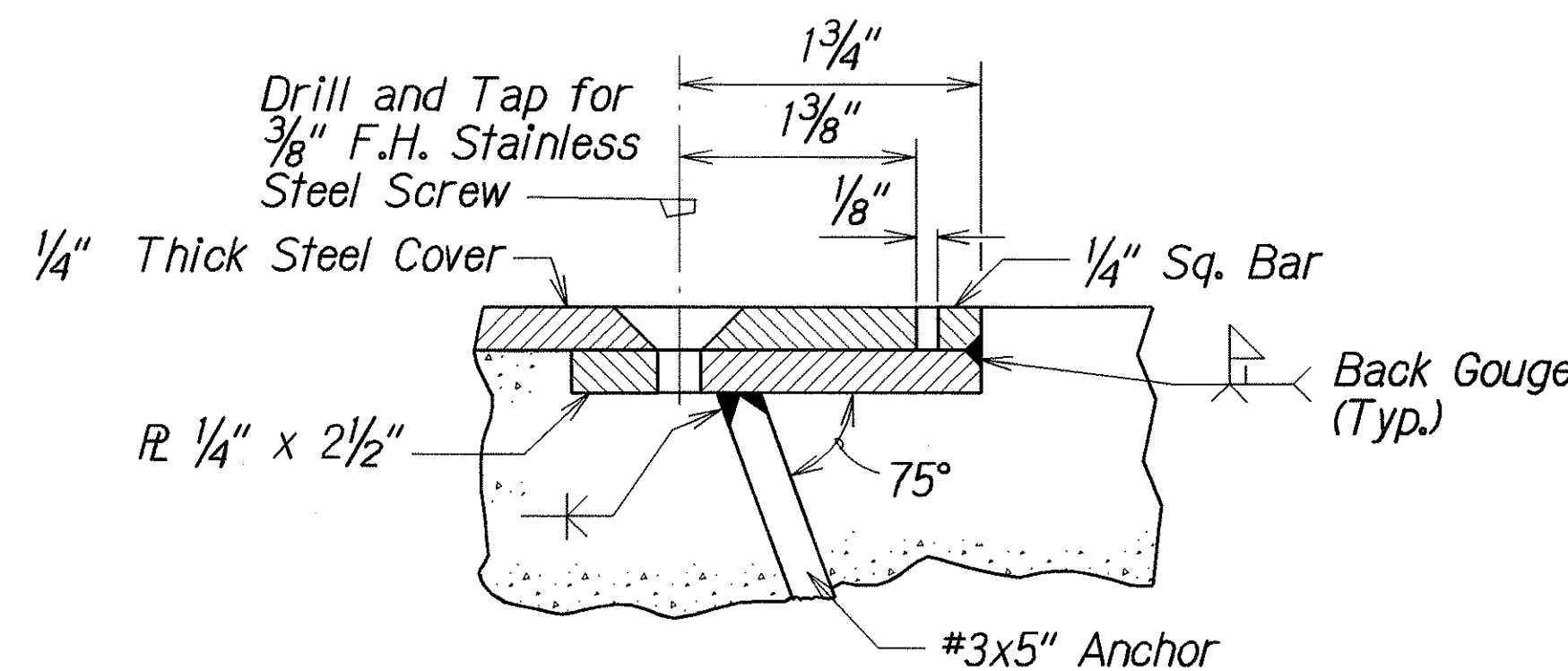
|  |                                      |
|--|--------------------------------------|
| 6/9/06   | Added Pavement Reconstruction detail |
| DATE   | REVISION                             |
| STATE OF HAWAII<br>DEPARTMENT OF TRANSPORTATION<br>HIGHWAYS DIVISION<br><b>DRAINAGE DETAILS</b><br>INTERSTATE ROUTE I-3 PAVEMENT PREVENTIVE MAINTENANCE<br>Halekou Interchange to<br>Kaneohe Marine Corps Base Hawaii<br>Federal-Aid Project No. IM-H3-1(80)<br>Scale: As Shown Date: June, 2006 |                                      |
| SHEET No. <b>HI</b> OF <b>2</b> SHEETS   |                                      |



### DETAIL OF STEEL COVER



### DETAILS OF STEEL FRAME



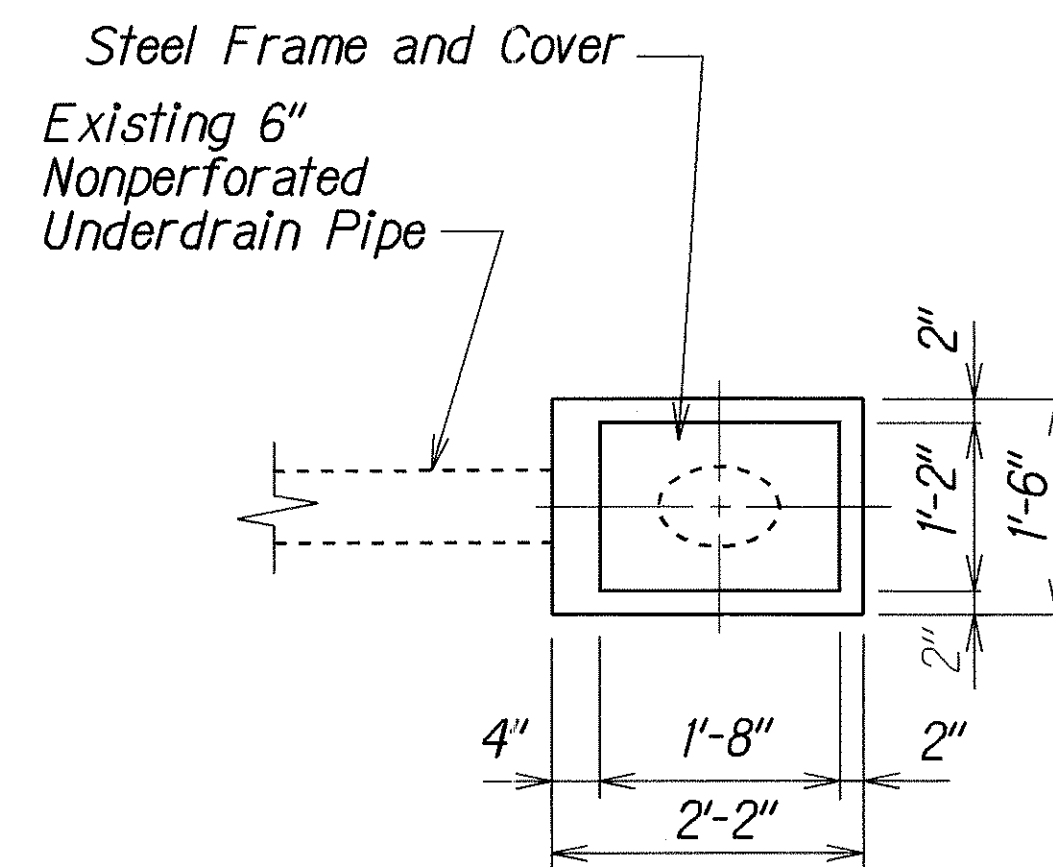
### DETAIL

Full Size

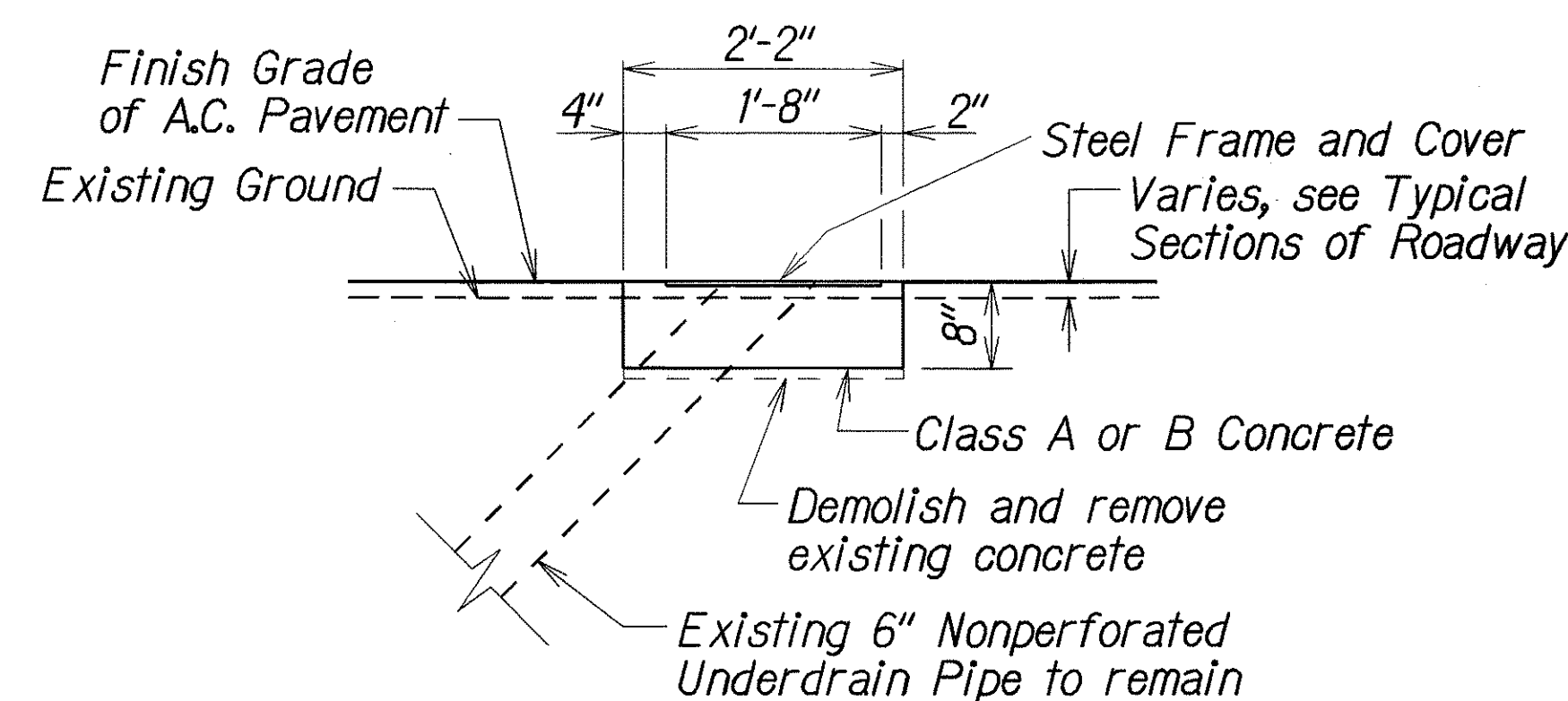
NOTE: All Steel Parts shall be galvanized in accordance with the requirements of ASTM A123.

### DETAILS OF STEEL FRAME AND COVER FOR CLEANOUT

Scale: 3"=1'-0"



### PLAN



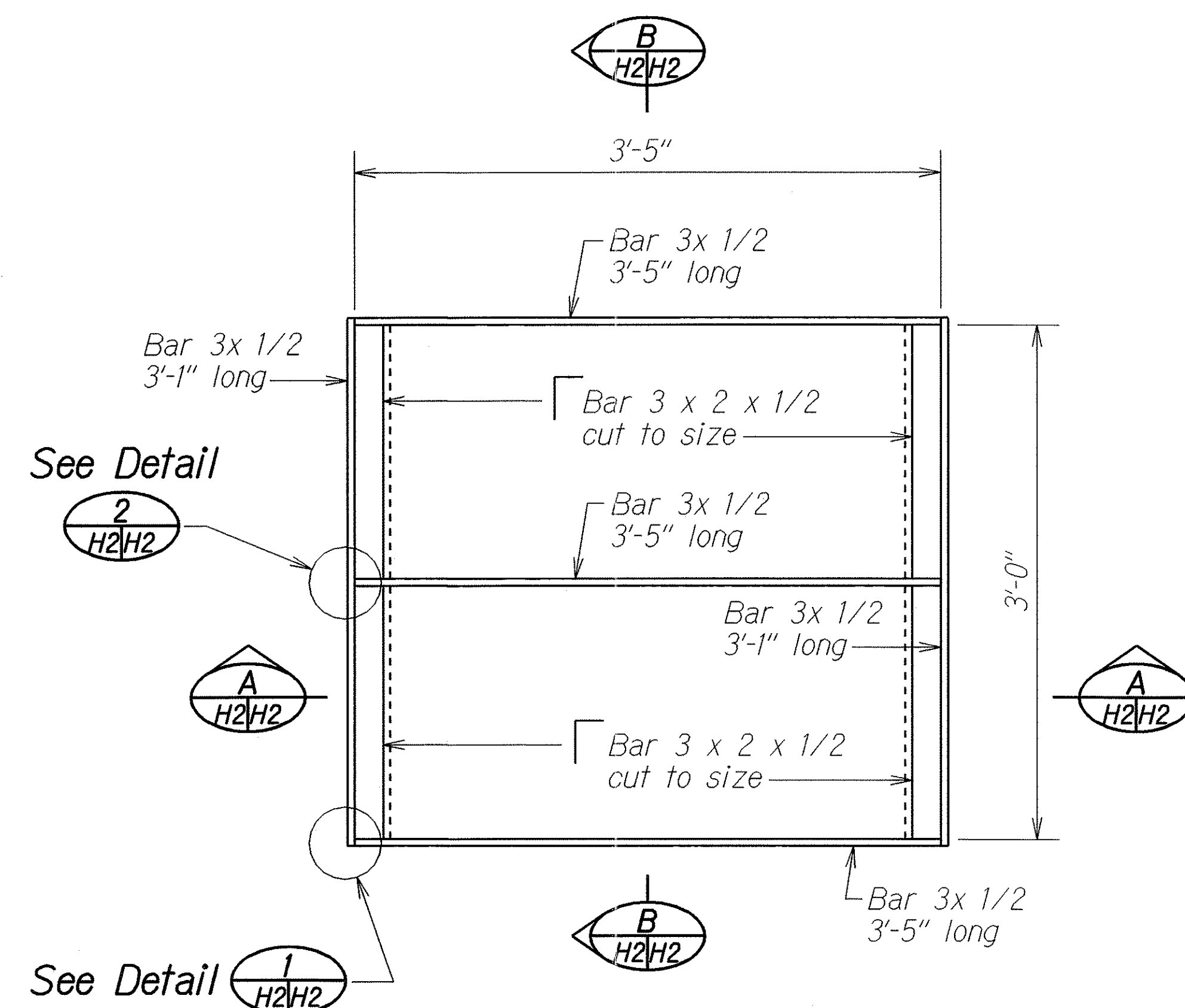
### ELEVATION

### TYPICAL DETAILS OF CLEANOUT

Scale: 3/4"=1'-0"

|                   |         |
|-------------------|---------|
| SURVEY PLOTTED BY | DATE    |
| DRAWN BY          | 2/26/06 |
| DESIGNED BY       |         |
| CHECKED BY        |         |
| NOTED BY          |         |
| QUANTITIES BY     |         |
| CHECKED BY        |         |

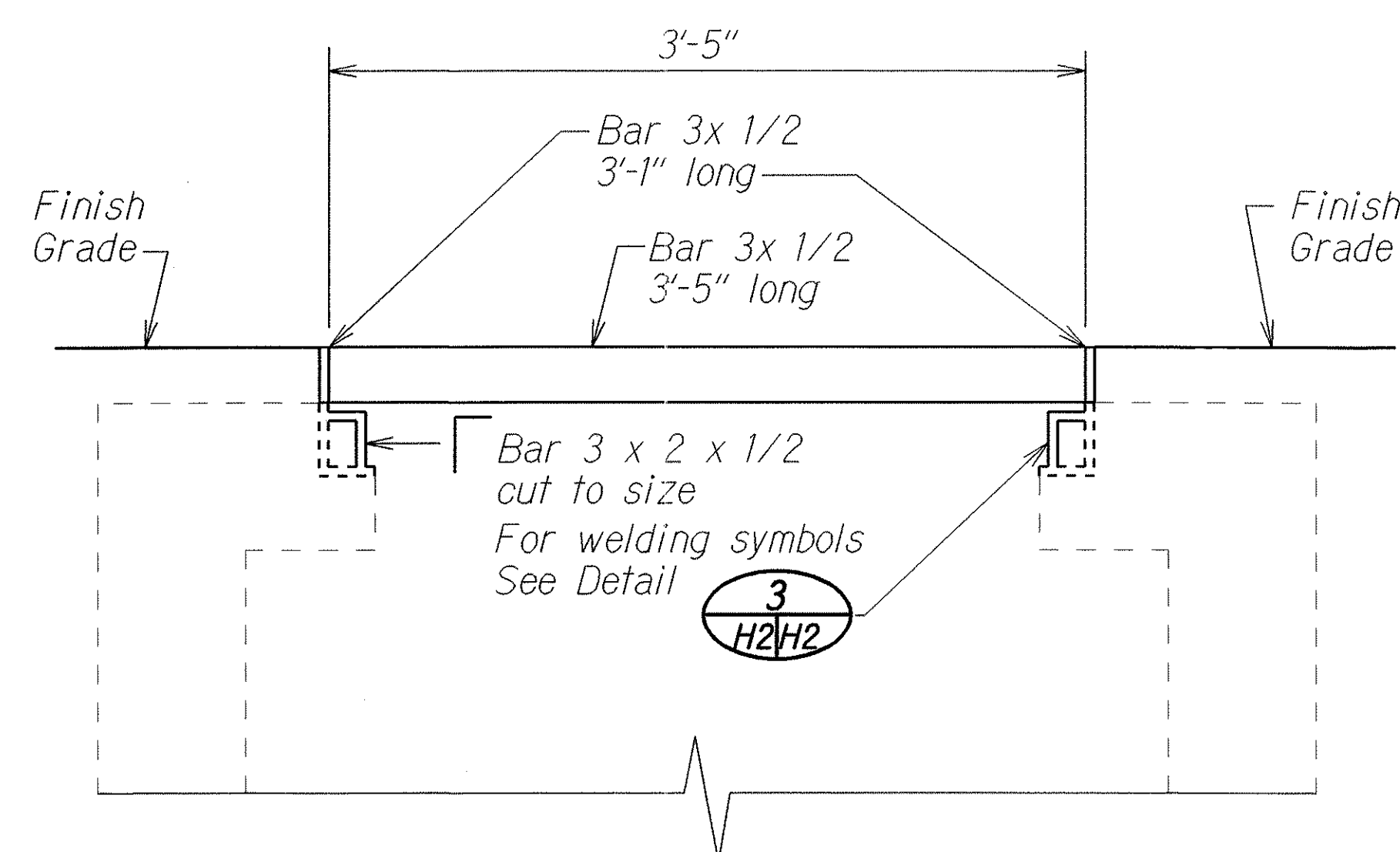
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | IM-H3-1(80)        | 2006        | 66        | 66           |



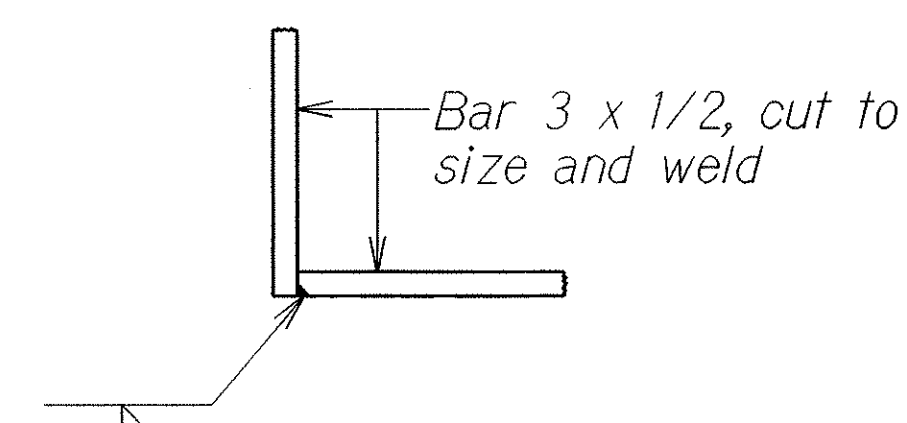
**PLAN**  
Scale: 1 1/2"=1'-0"

NOTES:

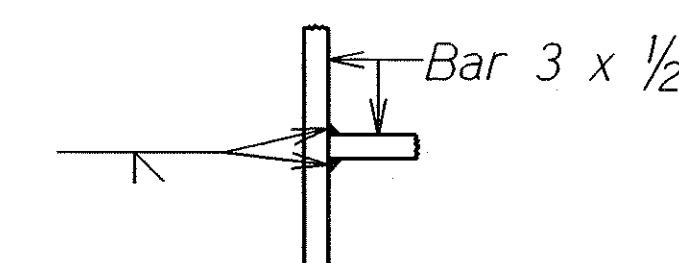
- Existing grates to be salvaged and re-used.
- All fillet welds, 5/16".



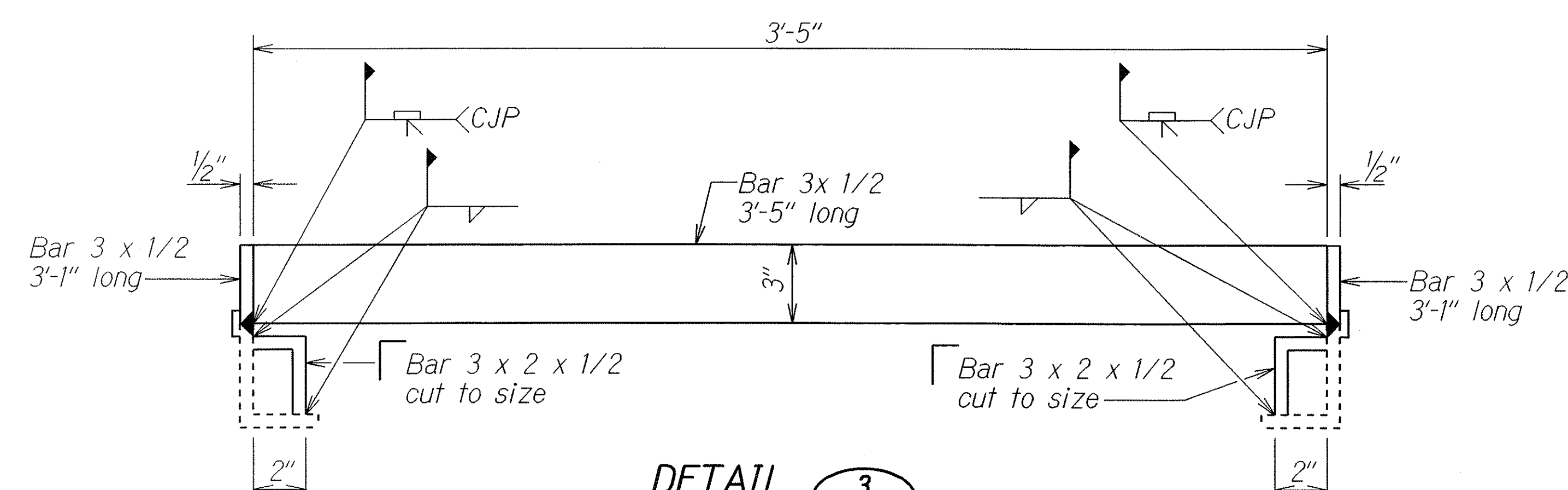
**SECTION A**  
Scale: 1 1/2"=1'-0"



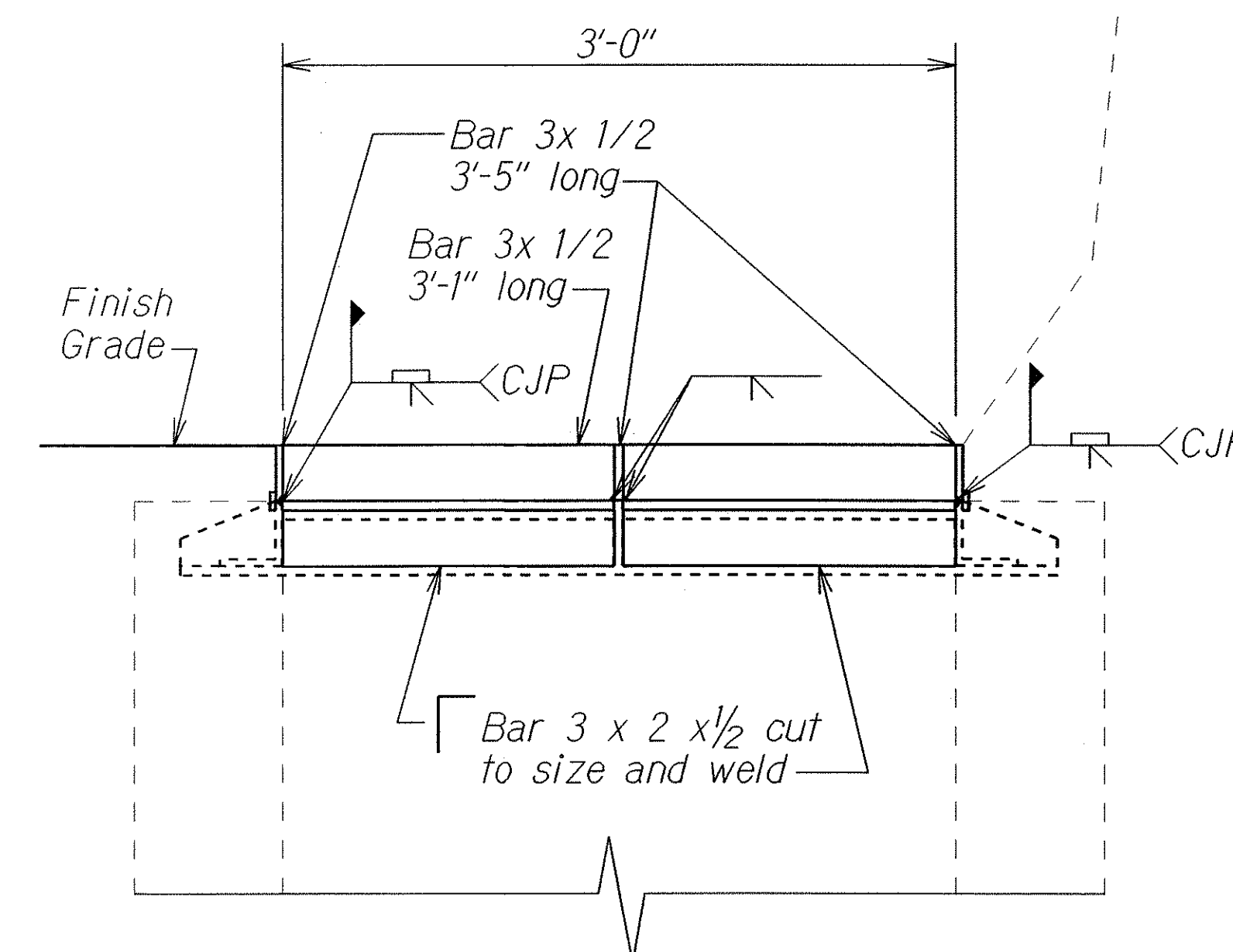
**DETAIL 1**  
Scale: 3"=1'-0"



**DETAIL 2**  
Scale: 3"=1'-0"



**DETAIL 3**  
Scale: 3"=1'-0"



**SECTION B**  
Scale: 1 1/2"=1'-0"

## ADJUSTING EXISTING STEEL FRAMES AND GRATES

|                   |      |
|-------------------|------|
| ORIGINAL PLAN     | DATE |
| SURVEY PLOTTED BY |      |
| DESIGNED BY       |      |
| TRACED BY         |      |
| NOTE BOOK         |      |
| QUANTITIES BY     |      |
| CHECKED BY        |      |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DRAINAGE DETAILS**

INTERSTATE ROUTE H-3 PAVEMENT PREVENTIVE MAINTENANCE  
Halekou Interchange to  
Kaneohe Marine Corps Base Hawaii  
Federal-Aid Project No. IM-H3-1(80)

Scale: As Shown Date: May 2006


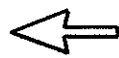

SHEET No. H2 OF 2 SHEETS

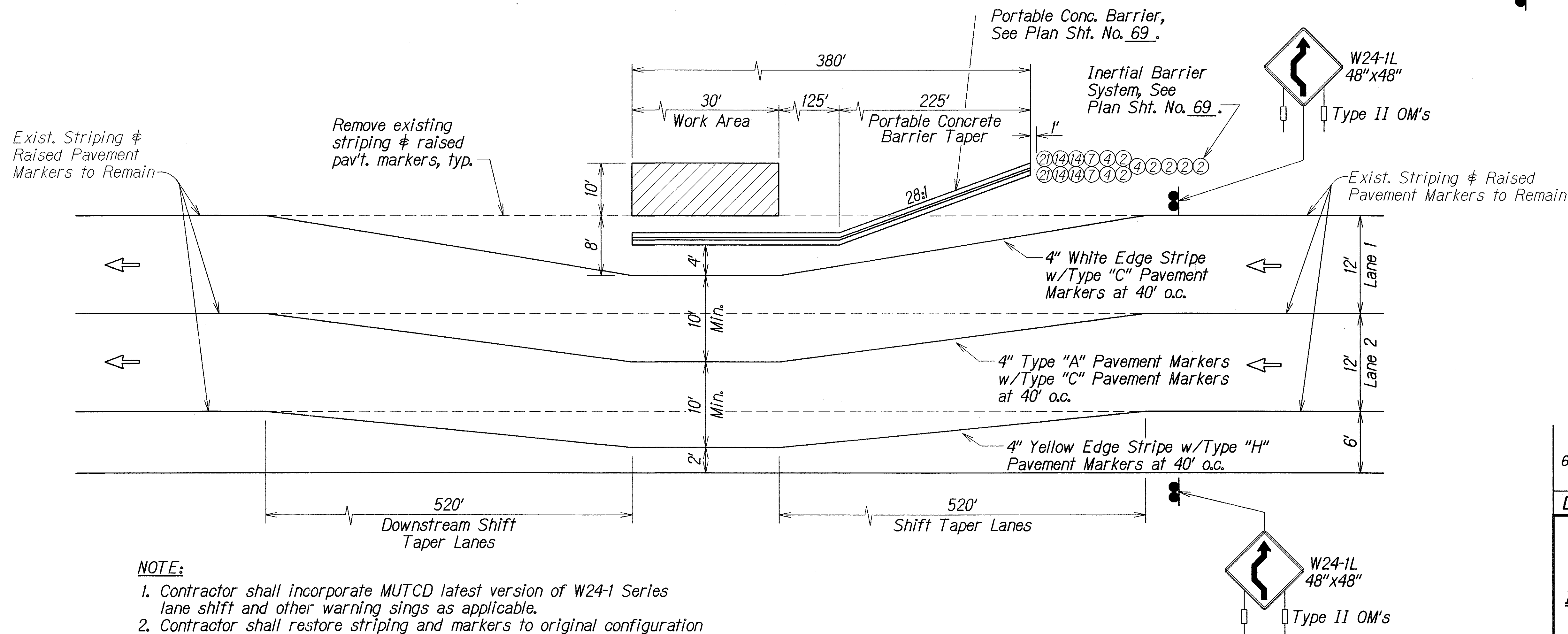
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO.  | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|------------|--------------|
| HAWAII              | HAW.  | IM-H3-1(80)        | 2006        | ADD. 66S-1 | 66           |

TRAFFIC CONTROL NOTES:

- Minimum width of traffic lane through work area is 10'.
- Relocation and/or removal of temporary signs and posts used for traffic control shall be considered incidental to various contract items.
- Damage to signs, temporary pavement markers, delineators, barricades and lamps caused by the public shall be repaired or replaced by the Contractor as soon as possible or as directed by the Engineer. This work shall be paid for under Item No. 645.2000 - Additional Police Officers, Additional Traffic Control Devices and Advertisements. Damage caused by the Contractor's negligence shall be repaired or replaced at the Contractor's expense.
- Work required in the Traffic Control Plan will be paid under applicable contract items or otherwise specified herein. All other traffic control work shall be in accordance with Section 645.1000 - Traffic Control. Work required for lane closures during the working day will not be paid for but shall be considered incidental to various contract items. Advance Construction Warning Signs as required under Section 645 of the Special Provisions shall be installed on all approaches to construction areas. This work shall be considered incidental to various contract items.
- The Contractor shall publish "Notice to Motorists" 1 week prior to the start of construction. Public notice shall be coordinated with the Department of Transportaion, Highways Division.
- The Contractor shall notify Lowell Tom (848-4578) at Oahu Transit Authority (The Bus) 4 weeks prior to start of construction.
- The Permittee shall make minor adjustments of intersections to fit field conditions.
- Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
- Regulatory and warning signs within the construction zone that are in conflict with the Traffic Control Plans shall be removed or covered. All signs shall be restored upon completion of the work.
- All construction warning signs shall be promptly removed or covered whenever the message is not applicable or not in use.
- The backs of all signs used for traffic control shall be appropriately covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces).
- Lane closure shall be limited only to the extent of accomplishing each day's work. As soon as each day's work is completed, the Permittee shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in the reverse order of installation. Existing faded or obliterated pavement markings that are necessary for safe traffic flow in the construction area shall be replaced with temporary or permanent markings before opening the roadway to public traffic each day.
- Replace permanent pavement markings and traffic signs upon completion of each phase of work.
- Buffer and taper areas on approach to any work area shall be kept clear of vehicles and equipment.
- "No Parking" signs shall be posted within any work area and for the buffer and taper areas approaching the work area.

LEGEND

-  Work Area
-  Detour Traffic Direction
-  Sign



- NOTE:
- Contractor shall incorporate MUTCD latest version of W24-1 Series lane shift and other warning sings as applicable.
  - Contractor shall restore striping and markers to original configuration if area is not shown to receive new striping.

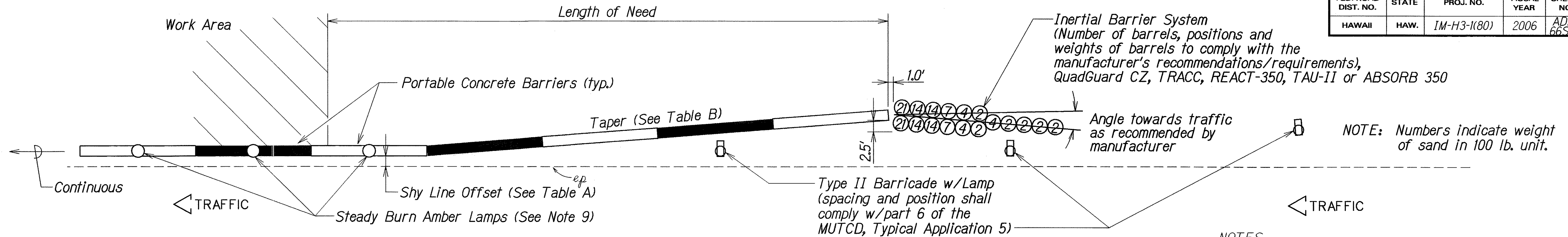
TEMPORARY STRIPING PLAN - LANE SHIFT ON 2 LANE ROAD  
Not to Scale

| 6/1/06   | This plan sheet added to contract plans. |
|--|--|
| DATE   | REVISION                                 |
| STATE OF HAWAII<br>DEPARTMENT OF TRANSPORTATION<br>HIGHWAYS DIVISION<br><b>TRAFFIC CONTROL PLAN</b><br><b>INTERSTATE ROUTE H-3 PAVEMENT PREVENTIVE MAINTENANCE</b><br><b>Halekou Interchange to Kaneohe Marine Corps Base Hawaii</b><br><b>F.A.I. Project NO. IM-H3-1(80)</b><br>Scale: As Shown Date: June 2006 |  |
| SHEET No. 1 OF 1 SHEETS  |  |

ADD. 66S-1

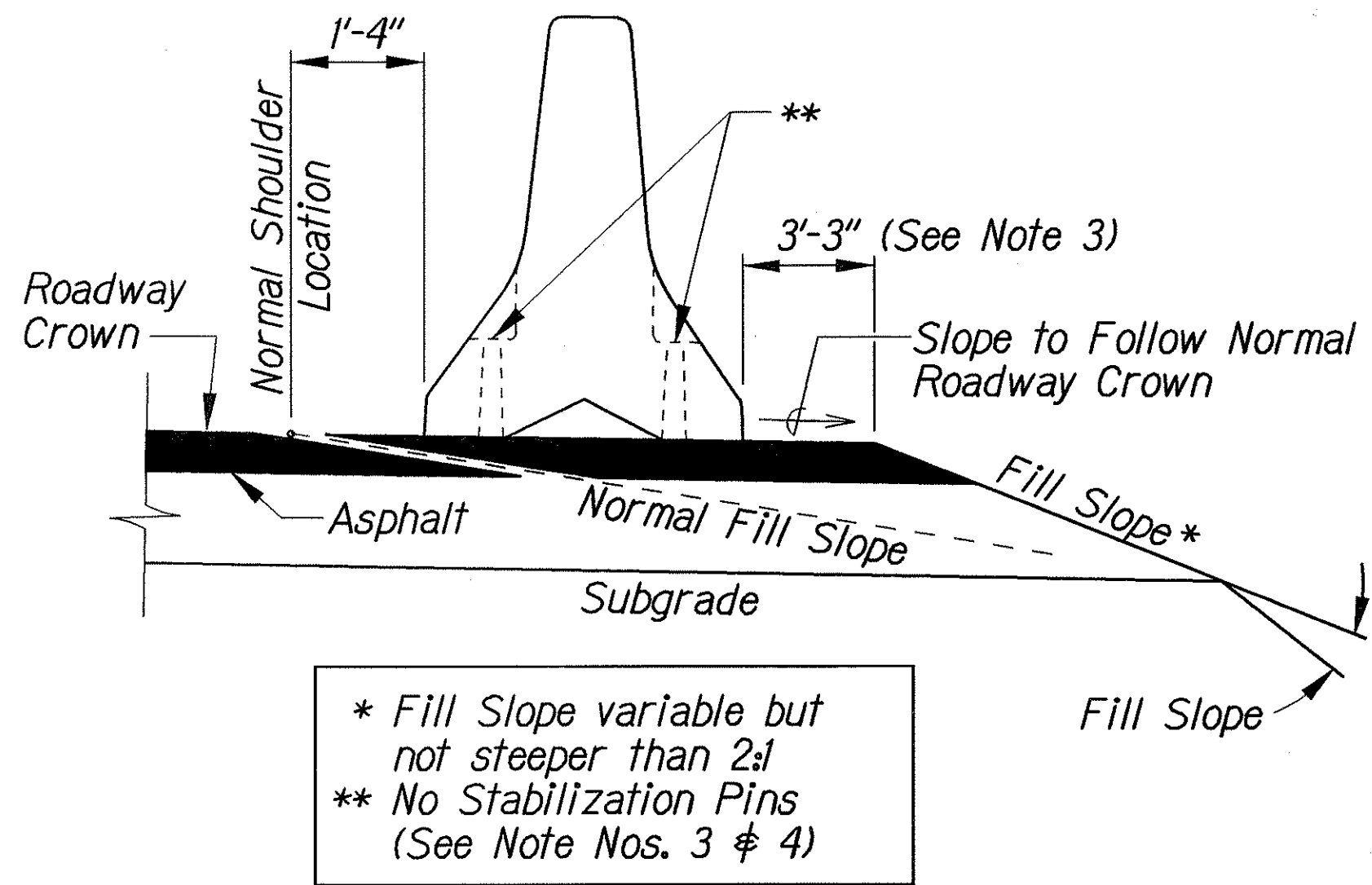


| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO.  | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|------------|--------------|
| HAWAII              | HAW.  | IM-H3-1(80)        | 2006        | ADD. 66S-2 | 66           |



TYPICAL DETAIL - PORTABLE CONCRETE BARRIER END TREATMENT  
Scale: 1" = 10'-0"

| METAL REINFORCEMENT TABLE |  |          |            |        |
|---------------------------|--|----------|------------|--------|
| MARK                      | LOCATION   | BAR SIZE | (NO. BARS) | SKETCH |
| H-1                       | Horizontal in Barrier Tied Inside V-1 Bars             | #5       | (6)        | 19'-3" |
| H-2                       | Centered Above Scuppers Long. & Transversely           | #5       | (6)        | 6'-6"  |
| H-3                       | Tied Above H-1 Bars to Support H-2, Tied to V-1        | #4       | (2)        | 1'-6"  |
| S-1                       | Horizontal in Top of Wing Wall & in Floor Back Wall    | #4       | (2)        |        |
| S-2                       | Horizontal Around Slots Between V-1's @ Scuppers       | #4       | (2)        |        |
| V-1                       | Vertical in Barrier (3) Each End & (2) at Each Scupper | #5       | (16)       |        |



STANDARD INSTALLATION  
(See Note No. 1)

| TABLE A<br>SHY LINE OFFSETS * |                  |
|-------------------------------|------------------|
| DESIGN SPEED (mph)            | SHY LINE OFFSETS |
| 70                            | 10.0'            |
| 65                            | 9.0'             |
| 60                            | 8.5'             |
| 55                            | 7.0'             |
| 50                            | 6.5'             |
| 45                            | 6.0'             |
| 40                            | 5.0'             |
| 35                            | 4.5'             |
| 30                            | 3.5'             |
| ≤ 25                          | 2.0'             |

| TABLE B<br>MAXIMUM TAPERS<br>FOR CONCRETE BARRIER |                 |                 |
|---|-----------------|-----------------|
| DESIGN SPEED (mph)                                | TAPER           |                 |
|   | INSIDE SHY LINE | BEYOND SHY LINE |
| 70  | 30:1            | 20:1            |
| 65  | 28:1            | 19:1            |
| 60  | 26:1            | 18:1            |
| 55  | 24:1            | 16:1            |
| 50  | 21:1            | 14:1            |
| 45  | 18:1            | 12:1            |
| 40  | 17:1            | 11:1            |
| 35  | 15:1            | 9:1             |
| ≤ 30  | 13:1            | 8:1             |

\* Note: Minimum shy line offset for tangent sections shall be 2'-0".

NOTES:

- For end treatment, layout, crash cushions and where needed see Project Plan Sheet No. 68.
- Barriers must be pinned together and cannot exceed the Table of Maximum Tapers.
- The concrete barrier "Standard Installation" design allows for 3'-3" of outward lateral movement if the barrier is struck. Barrier installations that require less than the 3'-3" of outward lateral movement should have stabilization pins.
- ASTM A-36 steel shall be used for the connection pin, connection loops and stabilization pins. A one piece pin with a 3" rounded top may be used in place of the detailed connection pin if the one piece pin meets ASTM A-36 requirements.
- A 4" white PVC sleeve may be used to form the lifting hole and if used the sleeve is to be left in place.
- Concrete shall be Class A and reinforcing shall be Grade 60.
- Identification and date of design will be as follows:  
**PROPERTY OF HDOT  
OCT 2001**  
Text letters and numbers shall be shown as on Standard Plan Sht. No. B-01. "PROPERTY OF HDOT" may be changed depending upon ownership. All Portable Concrete Barriers made for HDOT will be subject to rejection, if "PROPERTY OF HDOT" is not imprinted. The Contractor shall bear the cost of the rejected Portable Concrete Barriers.
- Minimum tangent length for portable Concrete Barrier System shall be 100' (5 units). This minimum does not include the required system length of the Inertial Barrier System.
- Install steady burn amber lamps on portable concrete barriers @ 20.0' o.c. Installing, maintaining and removing each steady burn amber lamp including changing of batteries and bulbs shall be considered incidental to applicable portable concrete barrier items.
- Furnishing, installing and maintaining the Type II Barricades and Lamps shall be considered incidental to Portable Concrete Barrier and shall not be paid for separately.

|                   |         |
|-------------------|---------|
| SURVEY PLOTTED BY | DATE    |
| DRAWN BY          | 3/20/06 |
| DESIGNED BY       |         |
| QUANTITIES BY     |         |
| CHECKED BY        |         |
| NO. 10/10/06      |         |

|        |  |
|--------|--|
| 6/1/06 | This plan sheet added to contract plans. |
| DATE   | REVISION                                 |

|   |                 |
|---|-----------------|
| STATE OF HAWAII<br>DEPARTMENT OF TRANSPORTATION<br>HIGHWAYS DIVISION                          |                 |
| <b>PORTABLE CONCRETE BARRIER</b>  |                 |
| <b>INTERSTATE ROUTE H-3 PAVEMENT PREVENTIVE MAINTENANCE</b>                                   |                 |
| <b>Halekou Interchange to Kaneohe Marine Corps Base Hawaii F.A.I. Project NO. IM-H3-1(80)</b> |                 |
| Scale: As Noted   | Date: June 2006 |
| SHEET No. 1 OF 1 SHEETS   |                 |

ADD. 66S-2