TO: Board of Supervisors

FROM: Planning and Building Services

MEETING DATE: February 28, 2023

DEPARTMENT CONTACT:	Julia Krog	**PHONE:**	707-234-6650
DEPARTMENT CONTACT:	Adrienne Thompson	**PHONE:**	707-234-6650

ITEM TYPE: Consent Agenda

TIME ALLOCATED FOR ITEM: N/A

AGENDA TITLE:
Discussion and Possible Action including Adoption of a Resolution Authorizing the Processing of a Consolidated Coastal Development Permit, LCP_2023-0001 (Caltrans, Middle-Mile Broadband Network), by the California Coastal Commission, for the California Department of Transportation to Install Broadband Infrastructure at Various Locations within their Right-of-Way throughout Mendocino County.

RECOMMENDED ACTION/MOTION:
Adopt a Resolution authorizing the processing of a Consolidated Coastal Development Permit, LCP_2023-0001 (Caltrans, Middle-Mile Broadband Network), by the California Coastal Commission, for the California Department of Transportation to install broadband infrastructure at various locations within their Right-of-Way throughout Mendocino County; and authorize chair to sign same.

PREVIOUS BOARD/BOARD COMMITTEE ACTIONS:
On May 17, 2022 the Board approved the final version of the Mendocino County 2022-2027 Strategic Plan. Included in said plan under "A Thriving Economy" is goal III(C) which is to "ensure that affordable and reliable broadband communications is available to all County residents".

SUMMARY OF REQUEST:
The California Department of Transportation (Caltrans) proposes to install broadband infrastructure such as fiber optic conduit and cable, network hubs, vaults, markers, and maintenance vehicle pullouts in various locations throughout the Mendocino County Coastal Zone. This is referred to as the Middle-Mile Broadband Network Project. The Middle-Mile Broadband Network Project will install broadband infrastructure along the State Highway System and Interstate System necessary to connect to a third-party operated Last Mile Broadband Network which will bring internet connectivity to homes, businesses, and community institutions.

Currently, the project is split in terms of permit jurisdiction between the California Coastal Commission and Mendocino County. The Coastal Act was amended by Senate Bill 1843, effective January 1, 2007, which allows for a consolidated permitting process for projects when the Coastal Development Permit authority is shared by a local government and the California Coastal Commission. Therefore, Caltrans is seeking a resolution which would consolidate the permit review under the California Coastal Commission for this specific project and streamline the permit process.

Additional details on the project may be found in the attached Memorandum and application materials.

ALTERNATIVE ACTION/MOTION:
Reject the Resolution, and direct staff to process a Coastal Development Permit for the portion of the project located in the County's jurisdiction.

DOES THIS ITEM SUPPORT THE GENERAL PLAN? Yes

STRATEGIC PLAN PRIORITY DESIGNATION: A Thriving Economy

SUPERVISORIAL DISTRICT: DISTRICT 4 and 5

VOTE REQUIREMENT: Majority

SUPPLEMENTAL INFORMATION AVAILABLE ONLINE AT: https://middle-mile-broadband-initiative.cdt.ca.gov and https://www.mendocinocounty.org/government/planning-building-services/public-notices

FISCAL DETAILS:

SOURCE OF FUNDING: N/A
CURRENT F/Y COST: N/A
ANNUAL RECURRING COST: N/A
BUDGET CLARIFICATION: N/A

BUDGETED IN CURRENT F/Y: N/A
IF NO, PLEASE DESCRIBE:
REVENUE AGREEMENT: N/A

AGREEMENT/RESOLUTION/ORDINANCE APPROVED BY COUNTY COUNSEL: Yes

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CEO LIAISON: Steve Dunnicliff, Deputy CEO
CEO REVIEW:
CEO COMMENTS:

FOR COB USE ONLY

Executed By:
Date:

Final Status:
Executed Item Type: Number:

COUNTY OF MENDOCINO

DEPARTMENT OF PLANNING AND BUILDING SERVICES
860 NORTH BUSH STREET · UKIAH · CALIFORNIA · 95482
120 WEST FIR STREET · FORT BRAGG · CALIFORNIA · 95437

JULIA KROG, DIRECTOR
PHONE: 707-234-6650
FAX: 707-463-5709
FB PHONE: 707-964-5379
FB FAX: 707-961-2427
pbs@mendocinocounty.org
www.mendocinocounty.org/pbs

MEMORANDUM

DATE: FEBRUARY 28, 2023

TO: HONORABLE BOARD OF SUPERVISORS

FROM: JULIA KROG, DIRECTOR OF PLANNING AND BUILDING SERVICES

SUBJECT: LCP_2023-0001 CONSOLIDATED COASTAL DEVELOPMENT PERMIT REQUEST FOR THE CALIFORNIA DEPARTMENT OF TRANSPORTATION TO INSTALL BROADBAND INFRASTRUCTURE AT VARIOUS LOCATIONS WITHIN THEIR RIGHT-OF-WAY THROUGHOUT MENDOCINO COUNTY

BACKGROUND

In July 2021, Governor Gavin Newsom signed into law Senate Bill (SB)156 to create an open-access middle-mile network and bring equitable high-speed broadband service to all Californians. This effort is supported by Executive Order (EO) N-73-20 which, among other things, directs all California state agencies to pursue a minimum broadband speed goal to guide infrastructure investments and program implementation.

The California Department of Transportation (Caltrans) proposes to install Middle-Mile Broadband Network (MMBN) infrastructure along approximately 3,000 miles of State Highways in Caltrans Districts 1, 2, and 3.

SUMMARY OF PROJECT

On February 10, 2023, Caltrans filed a request with Planning and Building Services requesting consolidation of the County's permitting authority for the Middle-Mile Broadband Network Project. The Project proposes the installation of broadband infrastructure including fiber optic conduit and cable, network hubs, vaults, markers, and maintenance vehicle pullouts in various locations through Mendocino County's coastal zone. Please see the Application Materials, Attachment B to this Memorandum, for a full description of each of these activities.

The Project is split in terms of permit jurisdiction with portions of the project lying within the retained jurisdiction of the California Coastal Commission and other portions within the County's permit jurisdiction. Pursuant to Public Resources Code section 30601.3, Caltrans is requesting that the Middle-Mile Broadband Network Project be consolidated and processed by the California Coastal Commission.

The proposed consolidation request by the applicant would allow for streamlined processing of this Project. The alternative would be the processing of multiple Coastal Development Permits by multiple jurisdictions, which would not allow for a thorough analysis of the project. By authorizing the consolidation, the Board of Supervisors would allow the California Coastal Commission to process a Coastal Development Permit for the proposed Middle-Mile Broadband Network Project.

Staff finds that pursuant to Public Resources Code Section 30601.3 consolidation for this project is appropriate as public participation will not be substantially impaired by the consolidation. Public participation procedures for public hearings on Coastal Development Permits processed by either the State or the County are nearly identical, especially given current hybrid meeting procedures that allow remote public participation.

RECOMMENDATION

Adopt a Resolution authorizing the processing of a Consolidated Coastal Development Permit, LCP_2023-0001 (Caltrans, Middle-Mile Broadband Network), by the California Coastal Commission, for the California Department of Transportation to install broadband infrastructure at various locations within their Right-of-Way throughout Mendocino County; and authorize chair to sign same.

ATTACHMENTS:

A. California Department of Transportation (Caltrans) Request, dated January 5, 2023
B. Application Materials
C. Draft Resolution of the Board of Supervisors

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

California Department of Transportation

DISTRICT 3
703 B STREET | MARYSVILLE, CA 95901-5556
(530) 821-3054 | TTY 711
www.dot.ca.gov

January 5, 2023

Ms. Julia Krog
Director
County of Mendocino
Department of Planning and Building Services
860 N Bush Street
Ukiah, CA 95482

Dear Ms. Krog:

The California Department of Transportation (Caltrans) proposes to install broadband infrastructure such as fiber optic conduit and cable, network hubs, vaults, markers, and maintenance vehicle pullouts in various locations throughout Mendocino County. This is referred to as the Middle-Mile Broadband Network (MMBN) (https://middle-mile-broadband-initiative.cdt.ca.gov).

Pursuant to Public Resources Code Section 30601.3, Caltrans is requesting the MMBN be consolidated and processed by the California Coastal Commission as the project crosses both state and local jurisdictional boundaries.

The following is enclosed for your review:

1. Application Form.
2. Project Description.
3. Statewide Standard Plans.
4. Jurisdictional Boundary Determination from California Coastal Commission.

Please respond that you agree to consolidate this permit. If you have any questions or need additional information, please contact me at (530) 831-3054 or dotrik.wilson@dot.gov.

Sincerely,

Dotrik Wilson

DOTRIK WILSON
Branch Chief

COUNTY OF MENDOCINO
DEPT. OF PLANNING & BUILDING SERVICES

120 WEST FIR STREET
FORT BRAGG, CA 95437
Telephone: (707)-964-5379

Case No(s) LCP_2023-0001
Date Filed 2/10/2023
Fee $
Receipt No.
Received by

Office Use Only

LCP CONSISTENCY REVIEW APPLICATION FORM

Name of Applicant	Name of Owner(s)	Name of Agent
Dotrik Wilson	California Department of Transportation (Caltrans)	N/A
Mailing Address	**Mailing Address**	**Mailing Address**
703 B Street Marysville, CA 95901	Same as applicant	N/A
Telephone Number	**Telephone Number**	**Telephone Number**
(530) 821-3054	Same as applicant	N/A

Project Description:

Please see attached description.

Driving Directions

The site is located on the various (N/S/E/W) side of State Routes 1 and 128 (name road)

approximately _____(feet/miles) _____ (N/S/E/W) of its intersection with

Please see attached jurisdictional determination map (provide nearest major intersection).

Assessor's Parcel Number(s)

Caltrans right of way

Parcel Size	Street Address of Project
N/A ☐ Square Feet ☐ Acres	N/A

Please note: Before submittal, please verify correct street address with the Planning Division in Ukiah.

Middle-Mile Broadband Network

Background

In July 2021, Governor Gavin Newsom signed into law Senate Bill (SB)156 (SB-156 Communications: broadband) to create an open-access middle-mile network and bring equitable high-speed broadband service to all Californians (Middle-Mile Broadband Initiative). This effort is supported by Executive Order (EO) N-73-20 (EO N-73-20) which, among other things, directs all California state agencies to pursue a minimum broadband speed goal to guide infrastructure investments and program implementation.

Purpose

The Middle-Mile Broadband Network Project will install broadband infrastructure along the State Highway System and Interstate System necessary to connect to a third-party operated Last Mile Broadband Network which will bring internet connectivity to homes, businesses, and community institutions.

Need

The lack of available middle-mile broadband infrastructure has been a major issue in connecting California's unserved and underserved communities. The statewide open-access middle-mile network included in SB 156 is a foundational investment to ensure every Californian has access to broadband Internet service that meets the connectivity needs of today, and well into the future. This project intends to support these communities in providing critical statewide broadband infrastructure to enhance access to and increase the affordability of high-speed internet for all Californians.

Project Description

The California Department of Transportation (Caltrans) proposes in install Middle-Mile Broadband Network (MMBN) infrastructure along approximately 3,000 miles of State Highway System in Districts 1, 2, and 3. Work would consist of the following elements, the majority of which are outlined on the attached MMBN statewide plan set.

1. Conduit Installation (Underground)

Four (4) two-inch diameter high-density polyethylene (HDPE) conduits would be installed underground (Figure 10). Conduit installation would occur with the Caltrans right of way (R/W) (e.g., along R/W fence, next to roadway prism, in pavement, etc.). Installation methods would be selected to avoid sensitive environmental resources and

existing utilities as the first priority. Methods of conduit installation are outlined below (see MMBND-1).

a. Trench in Travel Lane – approximately 3 to 6 inches wide and minimum depth of 24 inches (Detail A).
b. Trench in Shoulder – approximately 3 to 6 inches wide and minimum depth of 24 inches (Detail B).
c. Plowing – approximately 3 to 6 inches wide and minimum depth of 42 inches (Detail C).
d. Trenching – approximately 6 to 12 inches wide and minimum depth of 42 inches (Detail D).
e. Jack and Drill – approximately 8 inches diameter and minimum depth of 42 inches (Detail E).
f. Horizontal Directional Drilling – approximately 8 inches in diameter and minimum depth of 42 inches (Detail F).

Trench in Pavement (Travel Lane and Shoulder)

Trenching in pavement (micro-trenching) is a construction method for installation of broadband conduits under asphalt pavement (Figure 1). Equipment would consist of a specially designed saw blade for cutting into the asphalt connected to a vacuum truck/trailer, which removes spoils and dust. Once trenching is complete, cold planning and paving would be required on an approximately 2-foot-wide area surrounding the trench.

Figure 1. Micro-trenching

Plowing

Plowed conduit installations use a tracked vehicle with a reel carrier in front and a plow blade in back (Figure 2). As the vehicle moves, it simultaneously furrows the soil and

installs the conduit and cable. In some instances, the soil may be pre-ripped by a dozer equipped with a ripper blade.

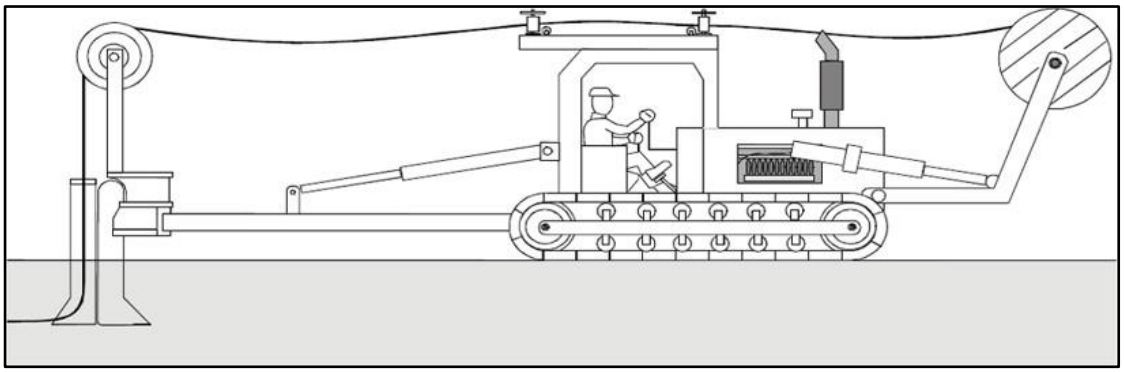


Figure 2. Plowing

Trenching

Trenched installations use equipment such as a trencher, excavator or backhoe to dig a trench (Figures 3 and 9). Typically, no more than 1,000 feet of trench would be exposed at any time during construction, and trenches would be filled at the end of each day.

Figure 3. Open Trenching

Jack and Drill

Jack and drill or auger boring would be accomplished with an auger boring machine by jacking a casing pipe through the earth while at the same time removing earth spoil from the casing by means of a rotating auger inside the casing (Figures 4 and 5) (Jack and Drill Video). Jack and drill is considered a trenchless method of construction; however, digging of an entry and exit pit of varying dimensions would be required.

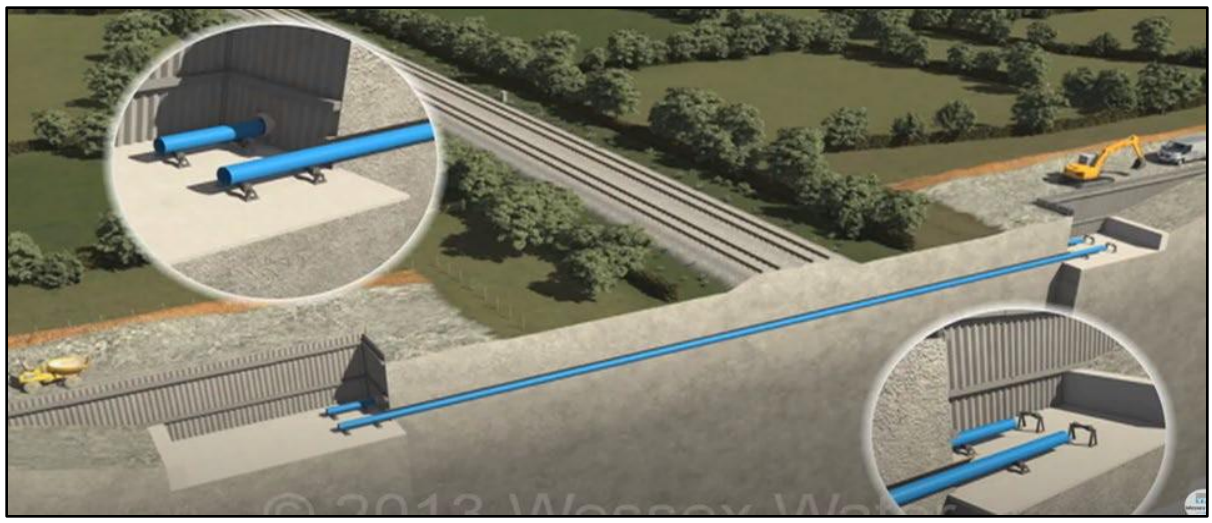


Figure 4. Jack and Drill

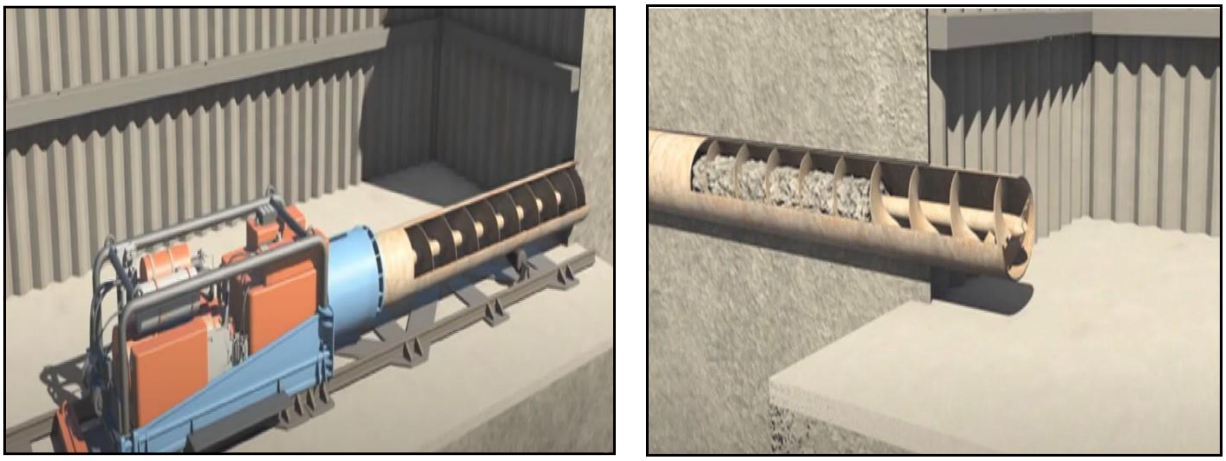


Figure 5. Jack and Drill/Bore

Horizontal Directional Drilling

Horizonal directional drilling would be used in various locations along project routes to cross areas where surface disturbance or sensitive resources must be avoided (e.g., streams/rivers, cultural resources, crossing railroads, etc.) (Figure 6). For stream/rivers, drilling would only occur if the conduit could not be attached to a structure. Directional drill lengths can range from less than 100 feet to more than 10,000 feet, depending on the type of equipment used.

To complete directional drilling, an approximately 7-foot-wide by 7-foot-long by 5-foot-deep work area would be established on each side of the crossing. One work area would contain an entry pit and drilling equipment, while the other work area would contain the exit pit. At the entry pit, a steerable drill stem would be used to bore a pilot hole to the exit pit. Once the drill stem reaches the exit pit, a reamer (i.e., device used

to enlarge the pilot hole) would be attached along with the conduit. The drilling machine would then ream an approximately 12-inch-diameter hole back toward the entry pit while pulling the conduit at the same time (Horizontal Directional Drilling Video). Once the reamer and conduit are pulled through the entry pit, and the entry/exit pits are backfilled and compacted, conduit placement would be complete.

During the drilling process, a bentonite slurry with polymer would be pumped through the bore hole to help lubricate the drill bit, prevent the bore tunnel from collapsing, and carry drill cuttings to the surface. Bentonite is a naturally occurring Wyoming clay known for its hydrophilic characteristics. The slurry would be pumped through the bore hole, collected at the surface, passed through machinery to remove the bore cuttings, and then recirculated through the hole. The slurry would be stored in tanks at the drill site when not in use. Any excess slurry remaining after the bore is complete would be removed from the site and either reused by the drilling contractor or disposed of at an appropriate location.

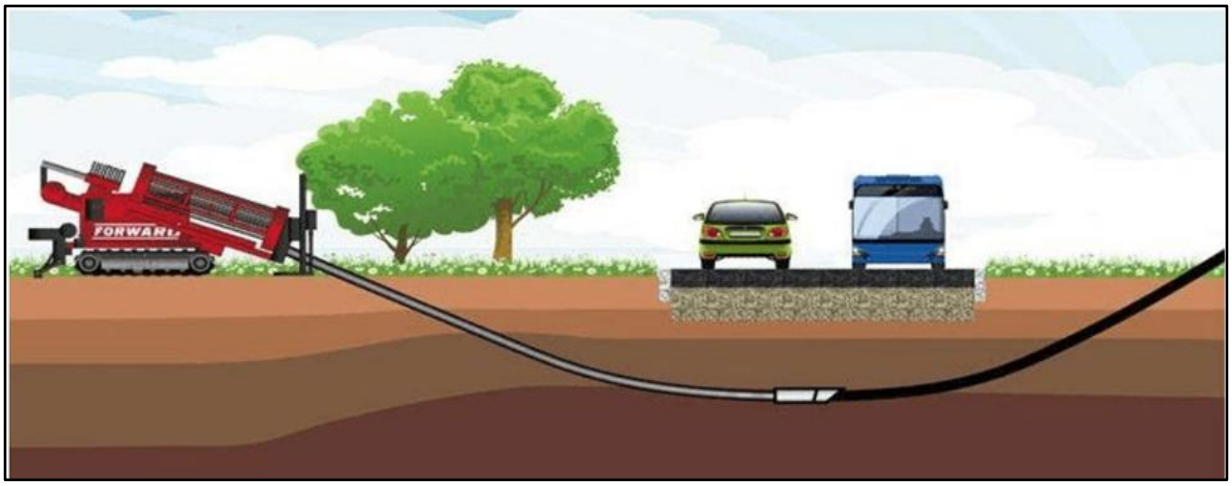


Figure 6. Horizontal Directional Drilling

2. Conduit Installation (Existing Structures and Culverts)

Bridges, Concrete Barriers, and Sound Walls

Bridge, concrete barrier, and sound wall mounted conduits would either be installed in existing unused conduit passages (if structure was designed to accommodate conduit), directly attached to the structure, or placed in approximately 8-inch diameter steel conduit attached to the structure. Bolts, clips, hangers, and/or anchors may be used to attach the conduit (see MMBND-12 to MMBND-16). When installing conduit on a bridge, an approximately 30-inch-wide by 48-inch-long by 36-inch-deep pit would be excavated at either end of the bridge to allow for pull vault installation (see vault installation below).

All conduit installations on structures would be designed to accommodate thermal and/or seismic movement. In some cases, conduit may need to be painted or covered with an approved coating to match the color of the structure.

Culverts

Conduit would be installed under or over culverts or attached to culverts with clamps (see MMBND-15). For conduit installation in unlined channels and ditches a minimum clearance of 24 inches below the flowline would be maintained.

3. Vault Installation

One 30-inch-wide by 48-inch-long by 36-inch-deep pull vault would be installed approximately every 2,500 feet (maximum spacing) (Figure 7). Every 5th vault would be a 48-inch-wide x 48-inch-long x 48-inch-deep splice vault. Vaults may be installed above surrounding grade or flush with surrounding grade (see MMBND-6, MMBND-7, and MMBND-8). If conduit is installed in bridge structures, vaults would be installed at both ends of the bridge to aid conduit installation and maintenance access.

Figure 7. Vault Installation

4. Network Hubs

Network hubs would be installed on concrete pads to provide transmission and reamplify signals (Figure 8). Hubs would be located a maximum of 50 miles apart and be located in proximity to power as electrical hook-ups would be required. Perimeter fencing and standby propane or diesel generators with fuel tanks would be installed at hub locations (see MMBND-11 and MMBND-17 to MMBND-22). Typical network hub dimensions would be 50 feet wide by 50 feet long.

Figure 8. Network Hub with Diesel Backup Generator

5. Maintenance Vehicle Pullouts

To improve safety, paved maintenance vehicle pullouts of varying dimensions would be constructed to provide parking for maintenance workers and field personnel (see MMBND-4).

6. Fiber Optic Markers

Fiber optic markers would be installed at every pull vault and splice vault. Fiber optic markers would also be installed approximately every 500 feet along the conduit path. At curve locations along the conduit path, fiber optic markers would be installed at the beginning, middle, and end of the curve. Metallic disk markers would also be installed in the pavement (see MMBND-5).

7. Geotechnical Borings

Geotechnical boring may be required to determine subsurface conditions for network hub foundations or if horizontal directional drilling or jack and drill/bore construction methods can be used.

Staging, Storage, and Access

Staging/Storage

Staging areas for construction equipment, materials, and fuels/lubricants would be selected by the construction contractor, as needed, before and/or during construction.

To ensure sensitive environmental resources are adequately protected, locations of staging and parking areas would be determined in consultation with the environmental team. Fuels, lubricants, and solvents would not be stored in staging areas located within 150 feet from streams or drainage features.

Access

Access to the majority of the project locations would be through existing developed roads; however, temporary and permanent access roads may be needed for construction and installation of network hubs and vaults.

Additional Representative Photographs

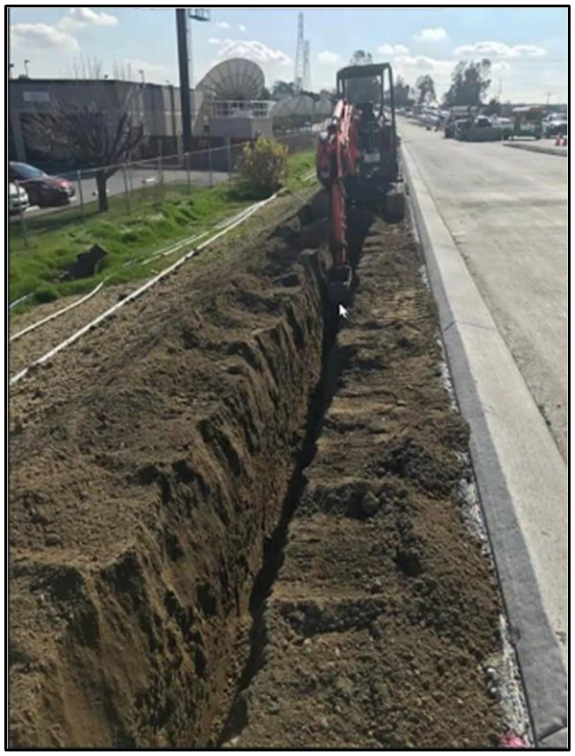


Figure 9. Conduit Trench

Figure 10. Conduit Placement

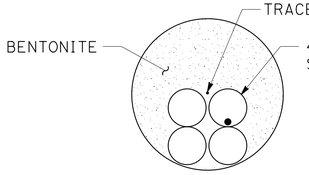
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				1	21

Ignacio Sánchez del Real 9-29-22
REGISTERED ELECTRICAL ENGINEER DATE

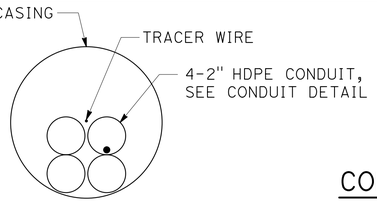
REGISTERED PROFESSIONAL ENGINEER — Ignacio Sanchez del Real — No. E14926 — Exp. 6-30-23 — ELECTRICAL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

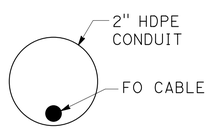
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



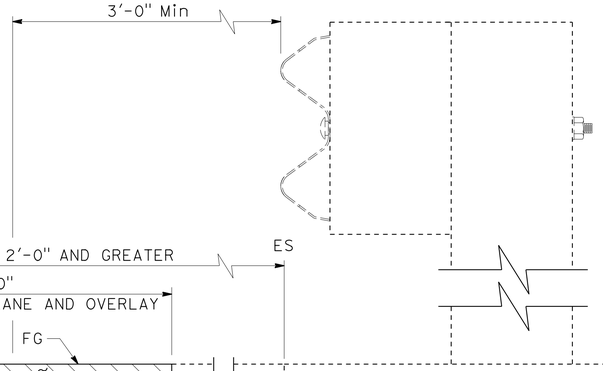
SECTION A-A

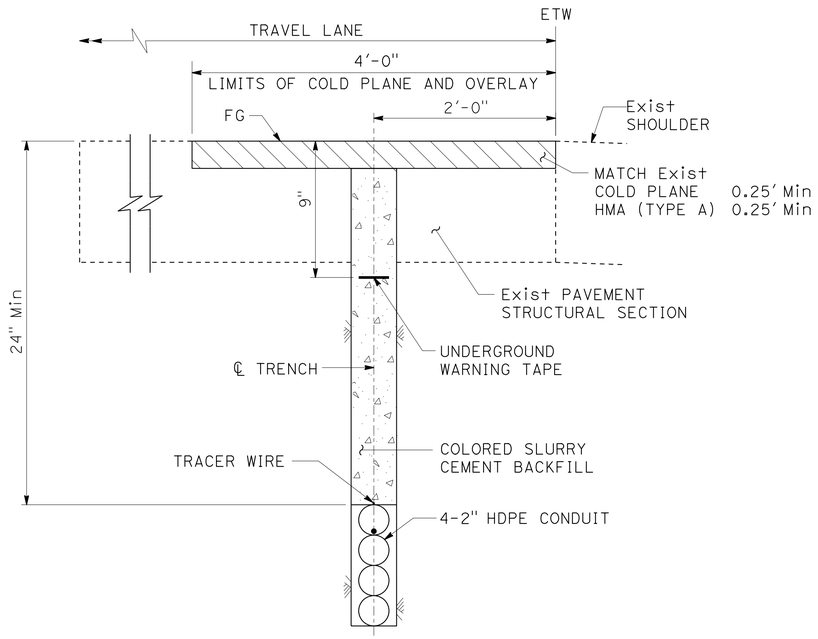


SECTION B-B



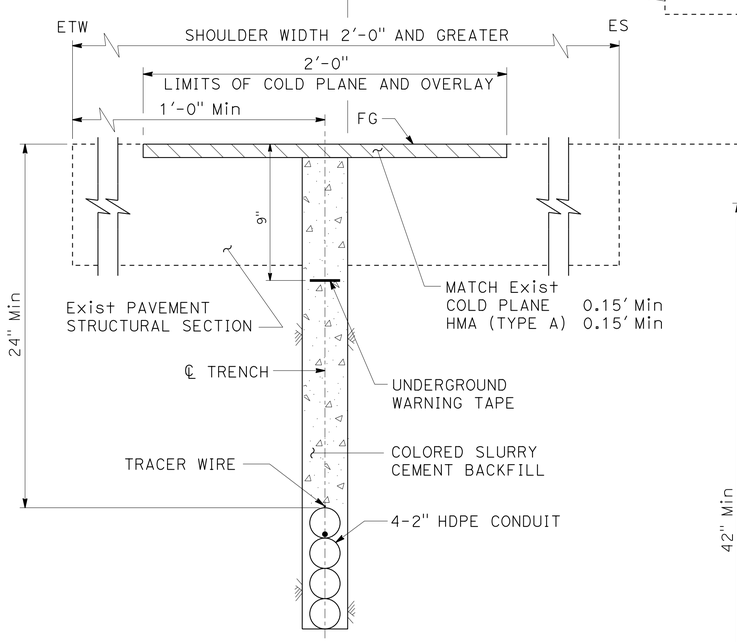
CONDUIT DETAIL





DETAIL A

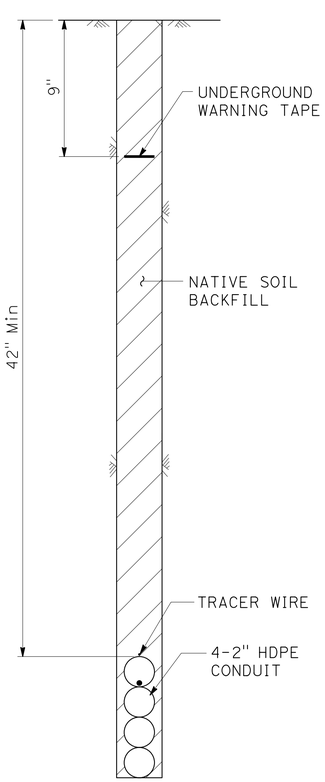
TRENCH IN TRAVEL LANE



DETAIL B

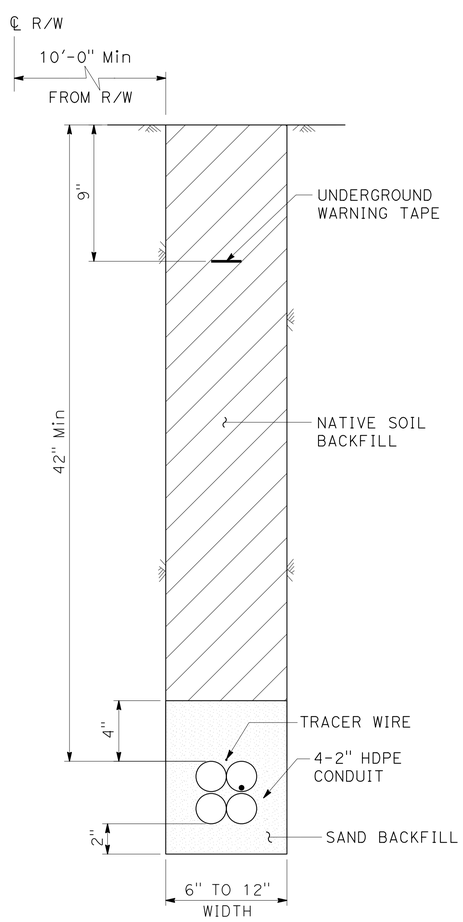
TRENCH IN SHOULDER

TRENCH IN PAVEMENT



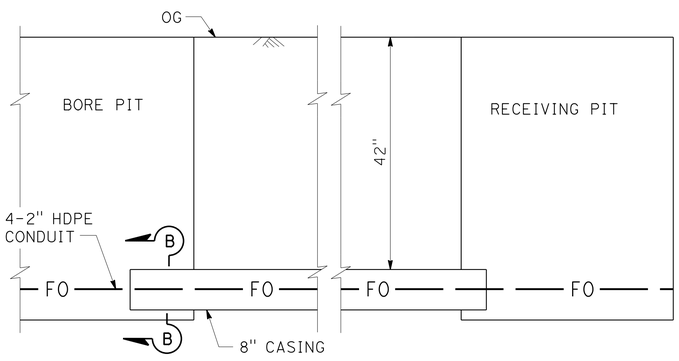
DETAIL C

PLOWING DETAIL



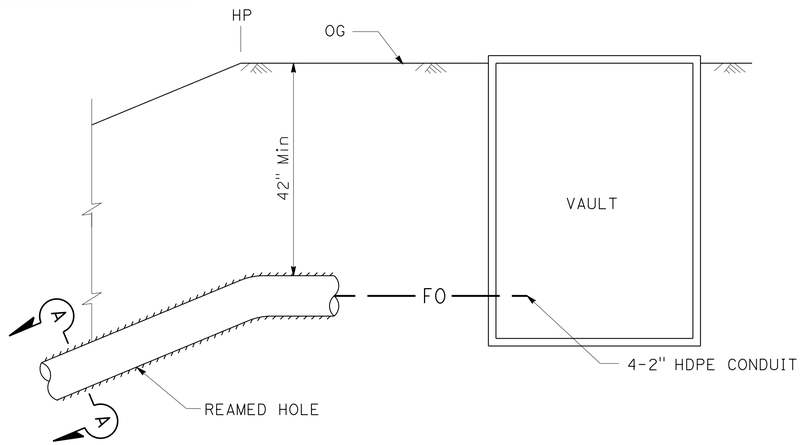
DETAIL D

TRENCH DETAIL



DETAIL E

TYPICAL JACK AND DRILL DETAIL



DETAIL F

TYPICAL HORIZONTAL DIRECTIONAL DRILLING DETAIL

APPROVED FOR MMBN WORK ONLY

MIDDLE MILE BROADBAND NETWORK DETAILS
(CONDUIT INSTALLATION METHODS)

NO SCALE

MMBND-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ELECTRICAL DESIGN
FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 5-OCT-2022
TIME PLOTTED => 11:27
09-29-22

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				2	21

Ignacio Sánchez del Real 9-29-22
REGISTERED ELECTRICAL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
Ignacio Sanchez del Real
No. E14926
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ELECTRICAL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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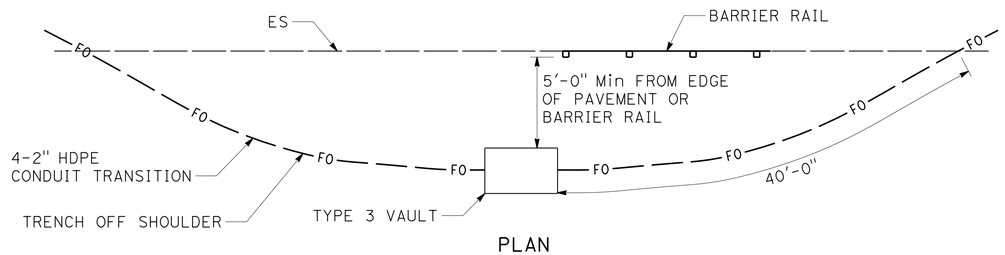
LEGEND:

1 4-2" HDPE CONDUIT.

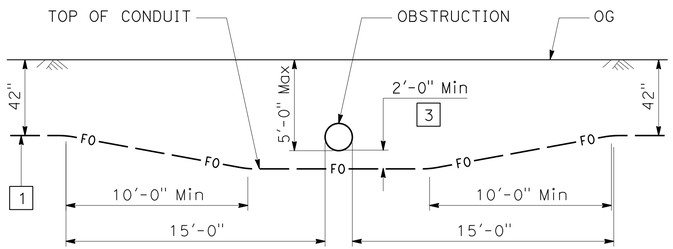
2 MAINTAIN 30 INCHES Min CLEARANCE BELOW THE FLOW LINE OF UNLINED DITCHES.

3 FOR HIGH RISK UTILITIES, MAINTAIN 4'-0" Min CLEARANCE.



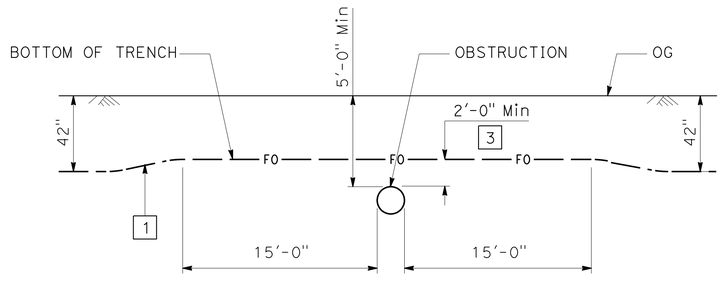
PLAN

CONDUIT TRANSITION



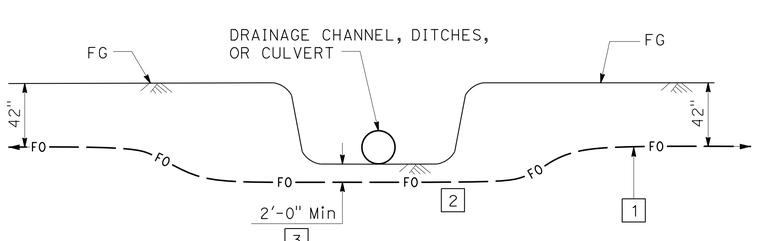
PROFILE

SHALLOW UNDERGROUND OBSTRUCTION DETAIL



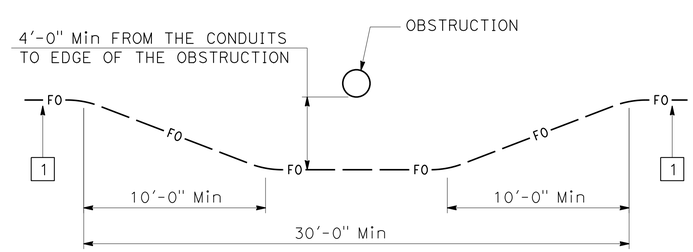
PROFILE

DEEP UNDERGROUND OBSTRUCTION DETAIL



PROFILE

BELOW DRAINIAGE CHANNEL, DITCHES, OR CULVERT INSTALLATION



PLAN

SURFACE OBSTRUCTION DETAIL

MIDDLE MILE BROADBAND NETWORK DETAILS
(CONDUIT INSTALLATION)

NO SCALE **MMBND-2**

APPROVED FOR MMBN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ELECTRICAL DESIGN
Caltrans
FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 5-OCT-2022
TIME PLOTTED => 11:28
09-29-22

BORDER LAST REVISED 7/2/2010
USERNAME => s121614
DGN FILE => 02of21-ub002_ConduitInstallation_MMBND2.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000
PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				3	21

Ignacio Sánchez del Real 9-29-22
REGISTERED ELECTRICAL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
Ignacio Sanchez del Real
No. E14926
Exp. 6-30-23
ELECTRICAL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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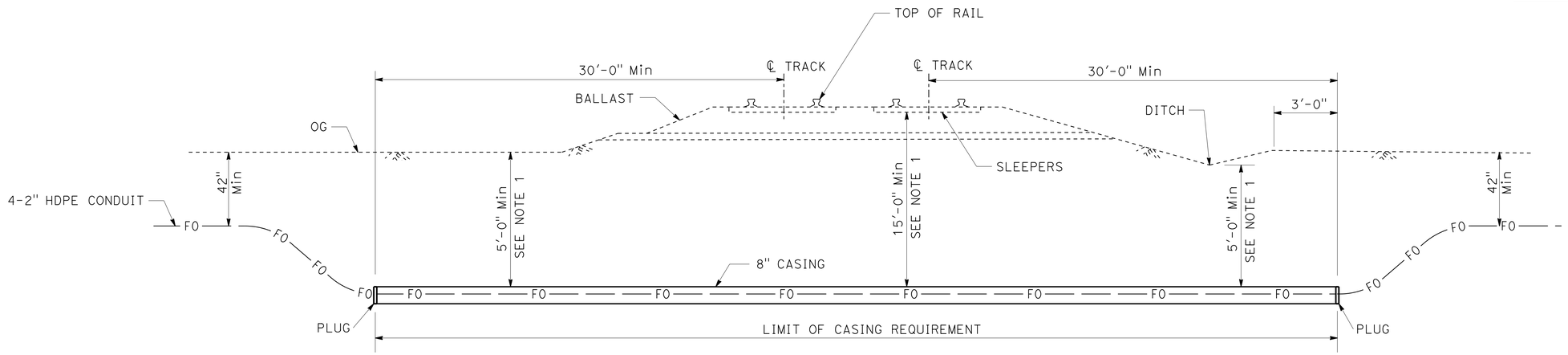
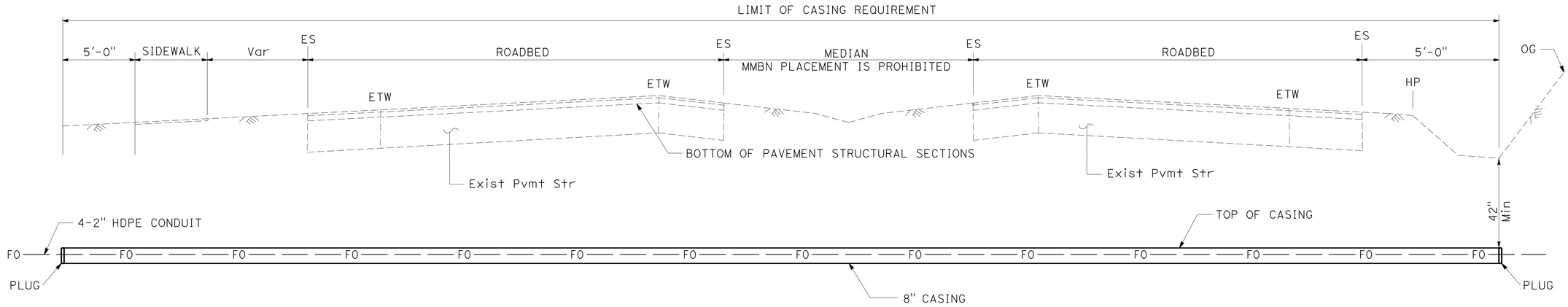
NOTE:

1. MAINTAIN THE LARGEST OF THE FOLLOWING MINIMUM CLEARANCES:
   a. 15'-0" BETWEEN THE BOTTOM OF A SLEEPER AND THE TOP OF THE CONDUIT CASING.
   b. 5'-0" BETWEEN THE TOP OF EXISTING GROUND AND THE TOP OF THE CONDUIT CASING.
   c. 5'-0" BETWEEN THE BOTTOM OF A DITCH AND THE TOP OF THE CONDUIT CASING.



PROFILE
RAILROAD CROSSING



PROFILE
ROADWAY CROSSING

MIDDLE MILE BROADBAND NETWORK DETAILS
(CONDUIT ENCASEMENT CROSSINGS)

NO SCALE **MMBND-3**

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CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

LAST REVISION 09-29-22
DATE PLOTTED => 5-OCT-2022
TIME PLOTTED => 11:28

ATTACHMENT B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				4	21

Charles D Suszko — 9-29-22
REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

Charles D. Suszko No. C43029 Exp. 3-31-24 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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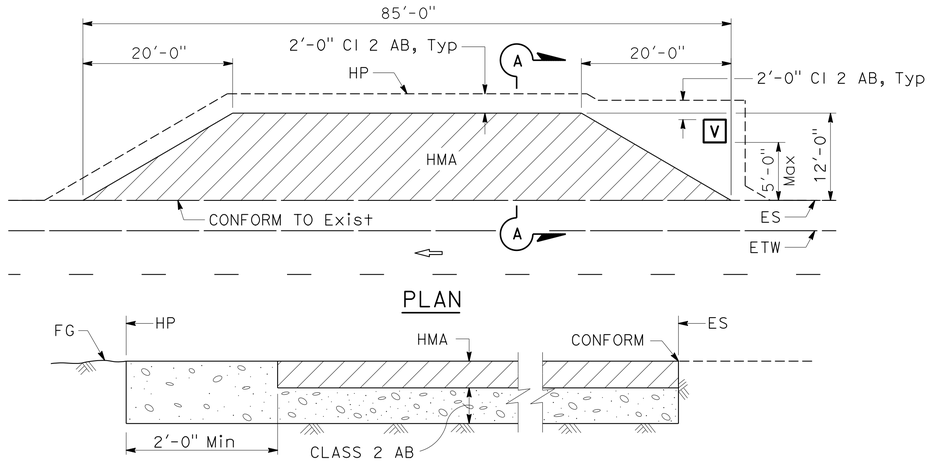
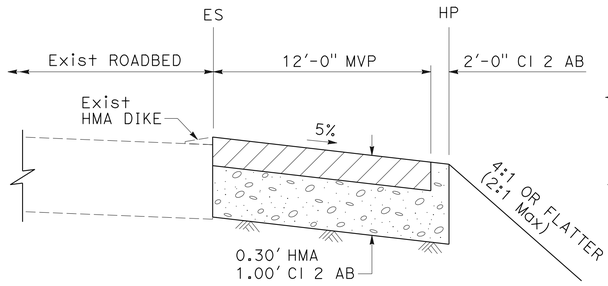


PLAN

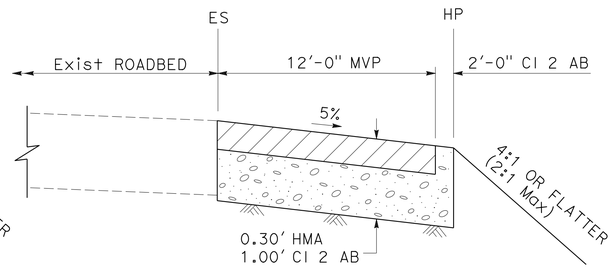
SECTION A-A

TYPICAL MAINTENANCE VEHICLE PULLOUT (MVP) AND VAULT LOCATION



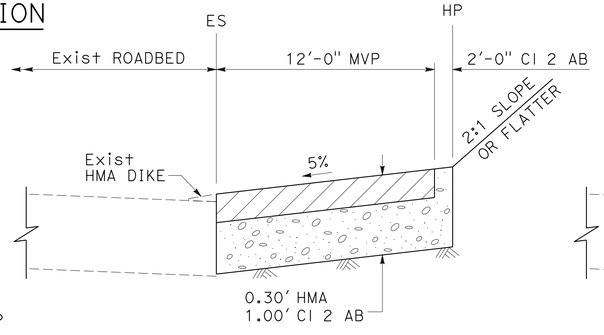
SECTION A-A

IN FILL SLOPE WITH Exist DIKE



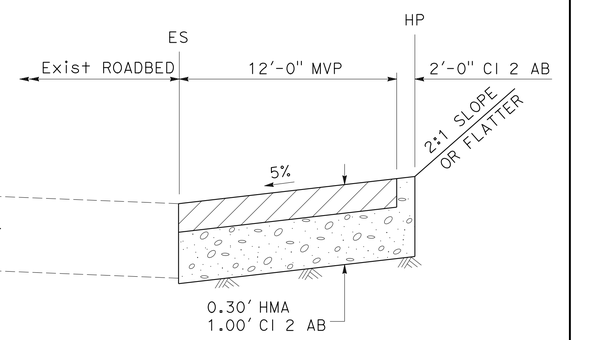
SECTION A-A

IN FILL SLOPE



SECTION A-A

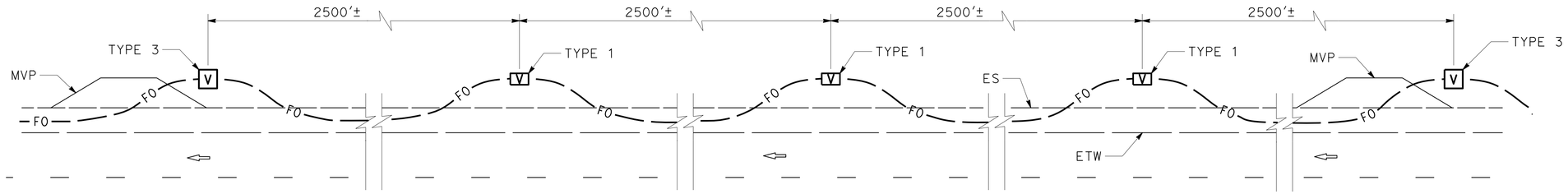
IN CUT SLOPE WITH Exist DIKE



SECTION A-A

IN CUT SLOPE

SLOPED MAINTENANCE VEHICLE PULLOUT (MVP) DETAILS



PLAN

TYPICAL TRENCH IN SHOULDER CONDUIT INSTALLATION AND VAULT SPACING

MIDDLE MILE BROADBAND NETWORK DETAILS

(MAINTENANCE VEHICLE PULLOUT)

NO SCALE

MMBND-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans®

FUNCTIONAL SUPERVISOR

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY	DATE REVISED

LAST REVISION — DATE PLOTTED => 11-OCT-2022 — TIME PLOTTED => 09:58

BORDER LAST REVISED 7/2/2010

USERNAME => s121614
DGN FILE => 04of21-ub004_MaintenanceVehiclePullout_MMBND4.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000 | PROJECT NUMBER & PHASE | 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				5	21

Ignacio Sánchez del Real 9-29-22
REGISTERED ELECTRICAL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
Ignacio Sanchez del Real
No. E14926
Exp. 6-30-23
ELECTRICAL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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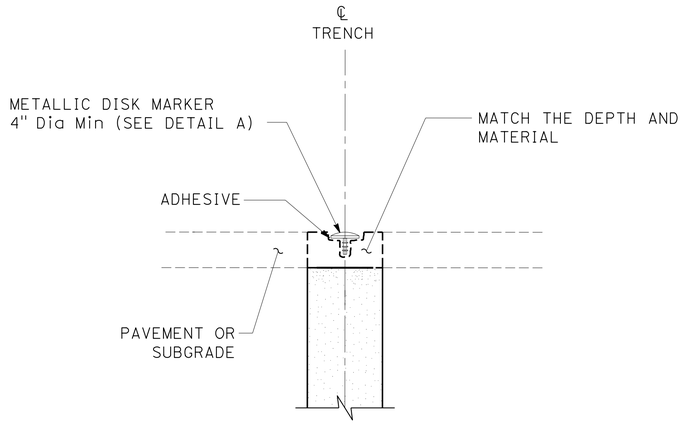
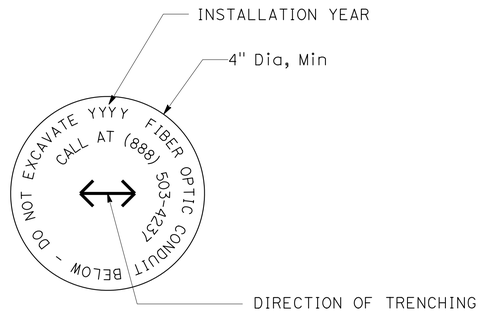
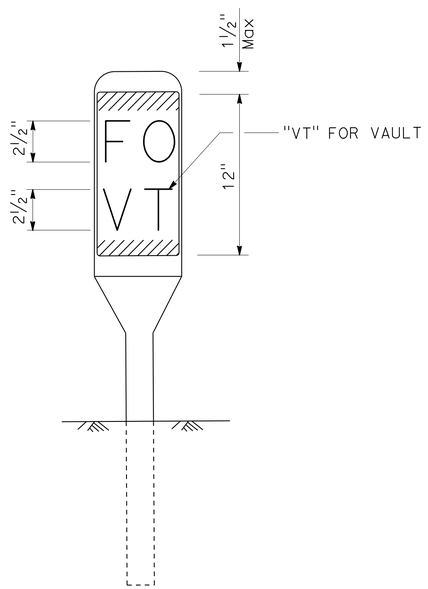


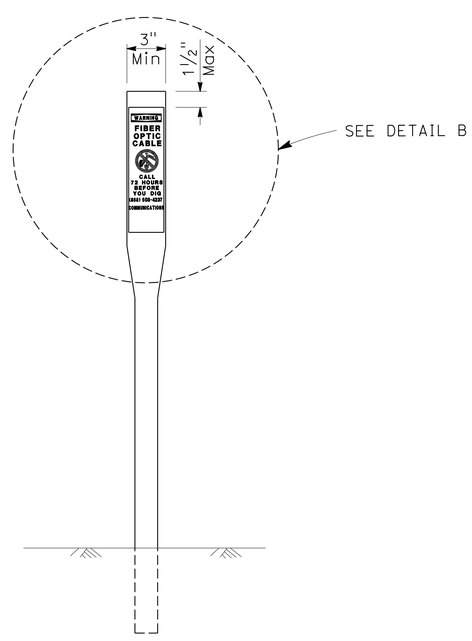
FIBER OPTIC DISK MARKER FOR PAVED AREAS



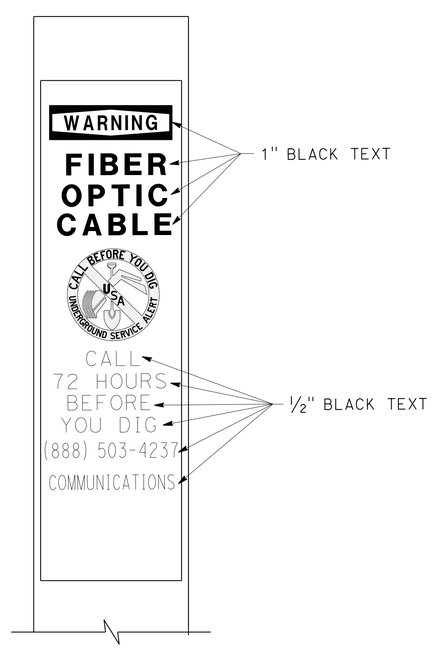
METALLIC DISK MARKER ETCHING DETAIL A



FIBER OPTIC MARKER, TYPE K-2 FOR VAULTS



FIBER OPTIC MARKER, CLASS 1, TYPE F FOR UNPAVED AREAS



DETAIL B

APPROVED FOR MMBN WORK ONLY

MIDDLE MILE BROADBAND NETWORK DETAILS (FIBER OPTIC MARKERS)

NO SCALE

MMBND-5

LAST REVISION DATE PLOTTED => 5-OCT-2022
TIME PLOTTED => 11:28

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ELECTRICAL DESIGN
FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

BORDER LAST REVISED 7/2/2010
USERNAME => s121614
DGN FILE => 05of21-ub005_FiberOpticMarkers_MMBND5.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

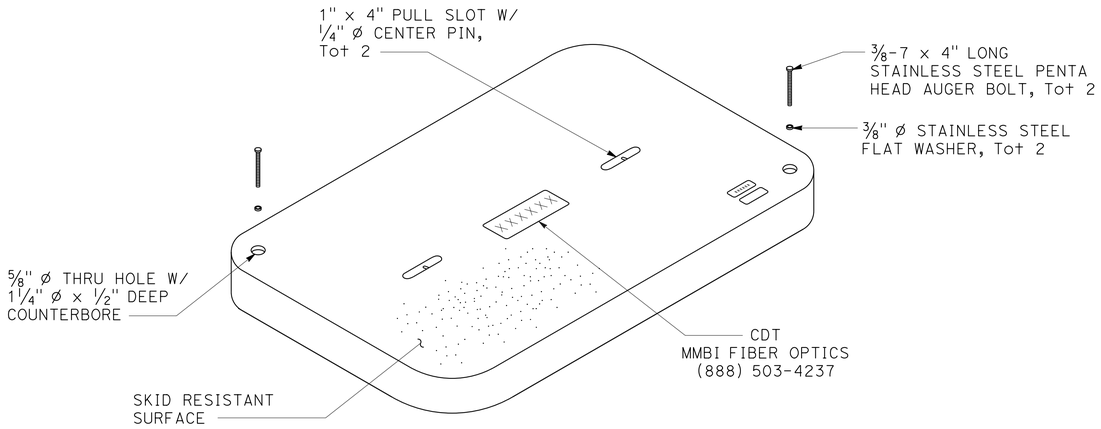
UNIT 0000
PROJECT NUMBER & PHASE 00000000001

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				6	21

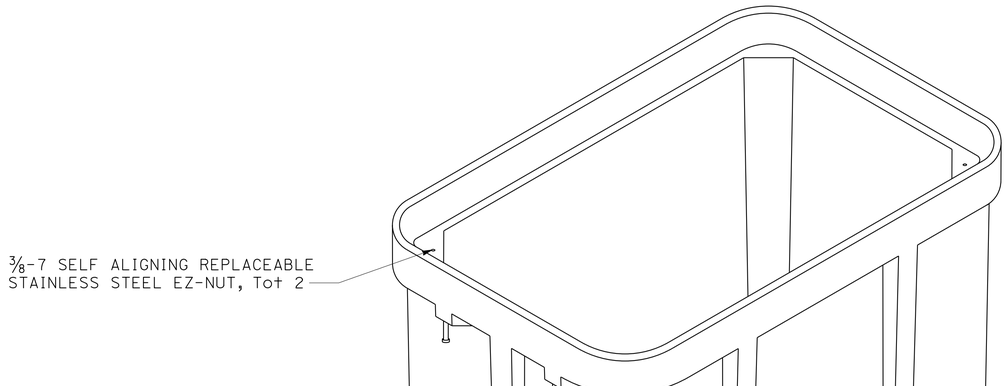
Ignacio Sánchez del Real 9-29-22
REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Ignacio Sanchez del Real
No. E14926
Exp. 6-30-23
ELECTRICAL
STATE OF CALIFORNIA



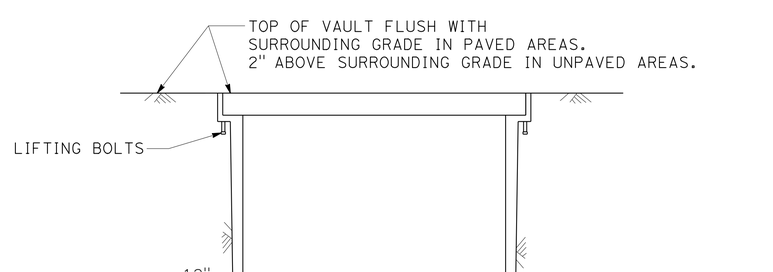
VAULT COVER AND ACCESS



VAULT BODY

NOTE:

1. THIS ASSEMBLY IS RATED FOR A STATIC DESIGN LOAD OF 22,500 LB OVER A 10" x 20" AREA AND MUST PASS A MINIMUM STATIC TEST LOAD OF 33,750 LB.



TYPICAL SECTION

VAULT (TYPE 1) 30"W X 48"L X 36"D

APPROVED FOR MMBN WORK ONLY

MIDDLE MILE BROADBAND NETWORK DETAILS
(VAULT, TYPE 1)

NO SCALE

MMBND-6

CALCULATED- DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED
FUNCTIONAL SUPERVISOR
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ELECTRICAL DESIGN

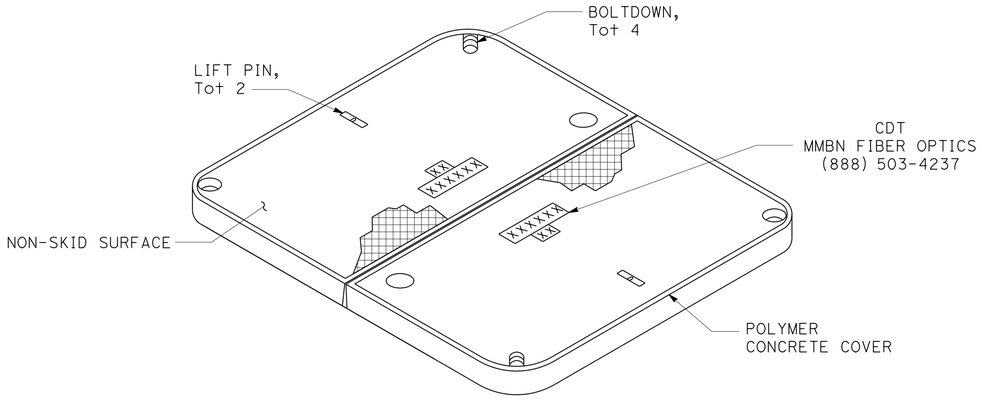
LAST REVISION | DATE PLOTTED => 5-OCT-2022
09-29-22 | TIME PLOTTED => 11:28

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				7	21

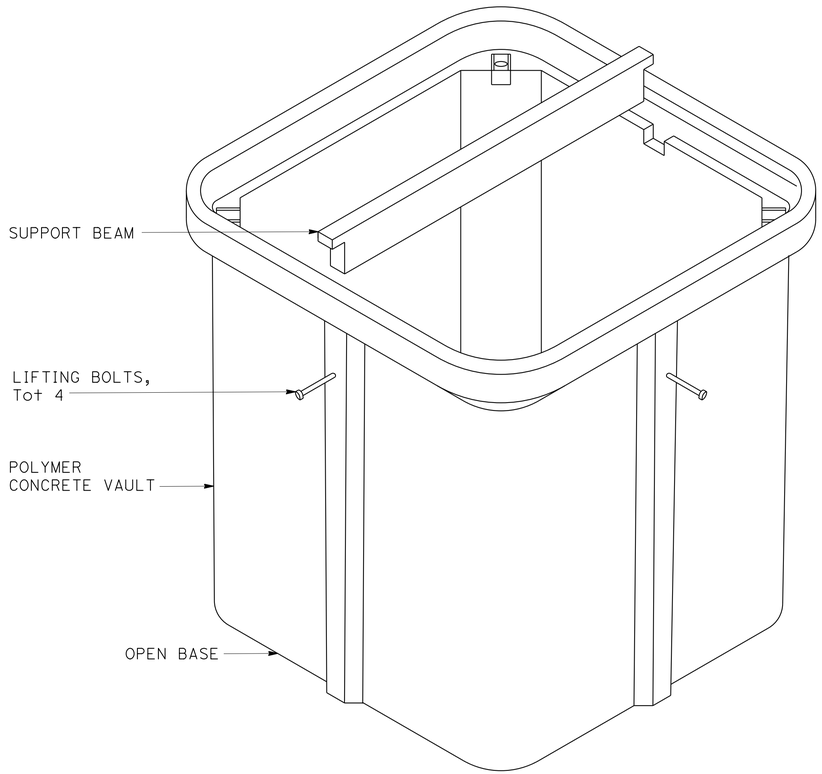
Ignacio Sánchez del Real 9-29-22
REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

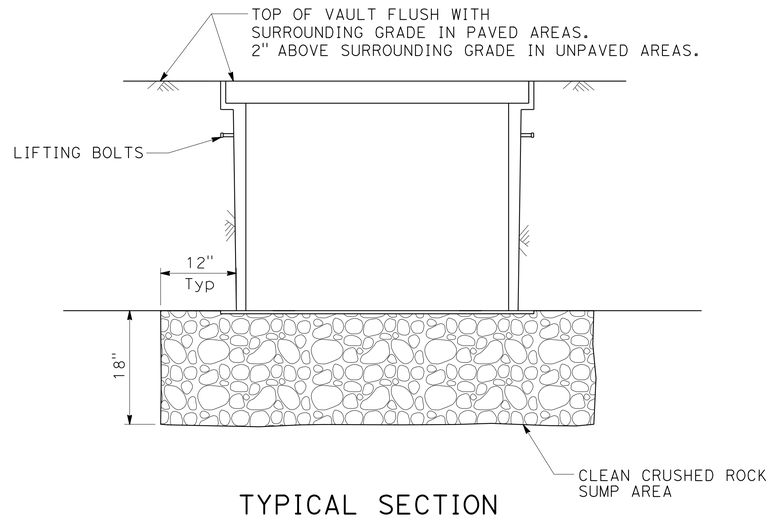
REGISTERED PROFESSIONAL ENGINEER — Ignacio Sanchez del Real — No. E14926 — Exp. 6-30-23 — ELECTRICAL — STATE OF CALIFORNIA



VAULT COVER AND ACCESS



VAULT BODY



TYPICAL SECTION

VAULT (TYPE 2) 48"W X 48"L X 48"D

APPROVED FOR MMBN WORK ONLY

MIDDLE MILE BROADBAND NETWORK DETAILS
(VAULT, TYPE 2)

NO SCALE

MMBND-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN
FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION | DATE PLOTTED => 5-OCT-2022
09-29-22 | TIME PLOTTED => 11:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				8	21

Ignacio Sánchez del Real 9-29-22
REGISTERED ELECTRICAL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
Ignacio Sanchez del Real
No. E14926
Exp. 6-30-23
ELECTRICAL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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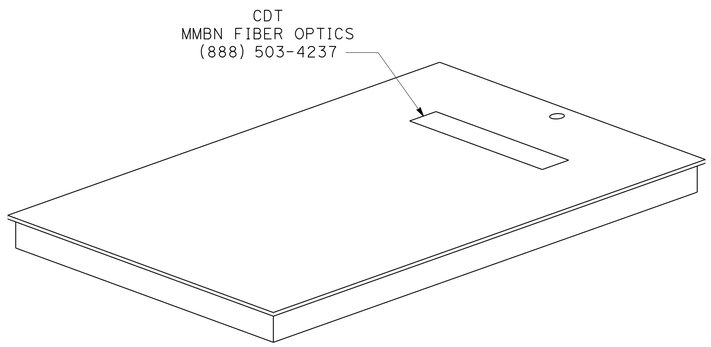
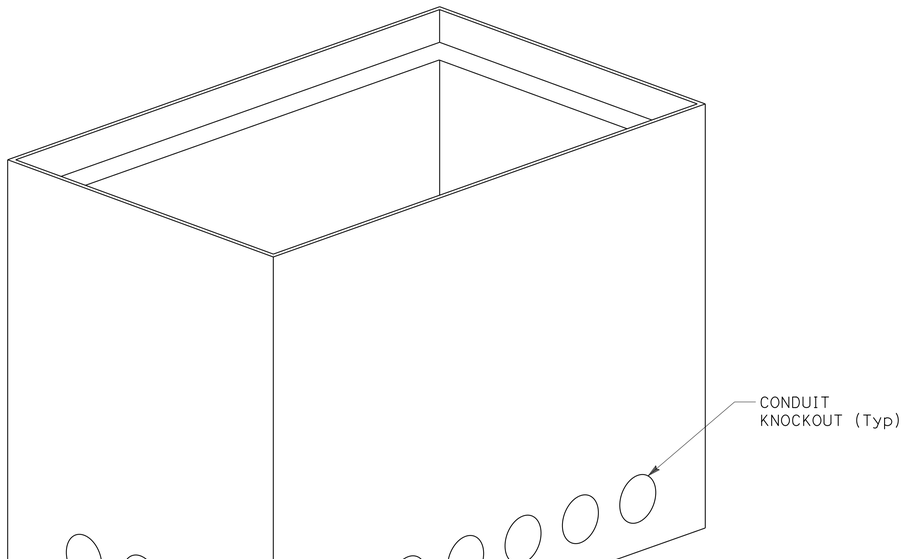
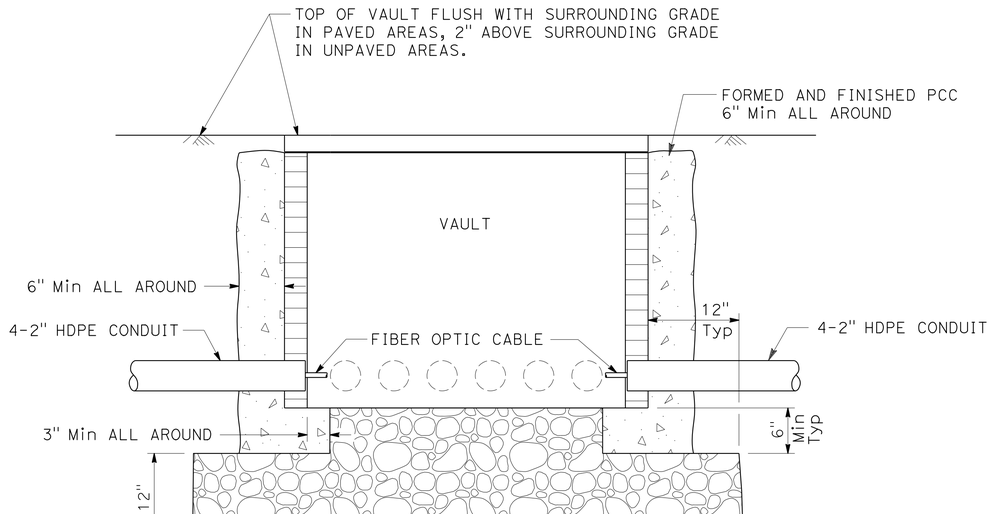


VAULT COVER AND ACCESS



VAULT BODY



TYPICAL SECTION

VAULT (TYPE 3) 30"W X 48"L X 36"D

APPROVED FOR MMBN WORK ONLY

MIDDLE MILE BROADBAND NETWORK DETAILS
(VAULT, TYPE 3)

NO SCALE

MMBND-8

LAST REVISION 09-29-22 | DATE PLOTTED => 5-OCT-2022 | TIME PLOTTED => 11:29

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN
FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
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REVISED BY
DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				9	21

Ignacio Sánchez del Real 9-29-22
REGISTERED ELECTRICAL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
Ignacio Sanchez del Real
No. E14926
Exp. 6-30-23
ELECTRICAL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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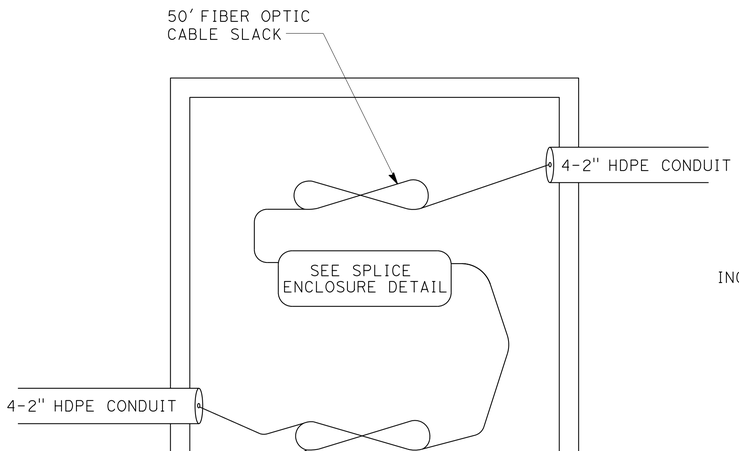
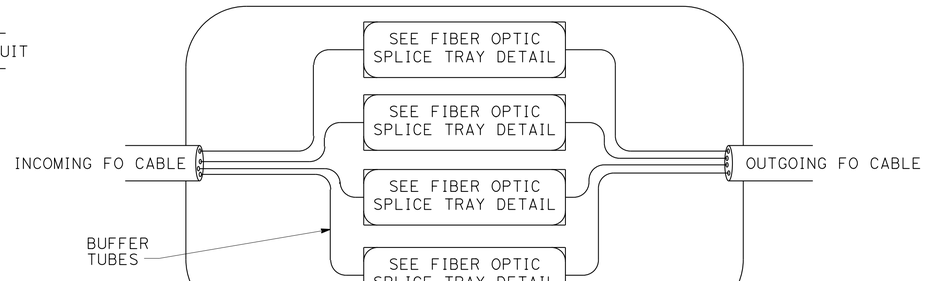
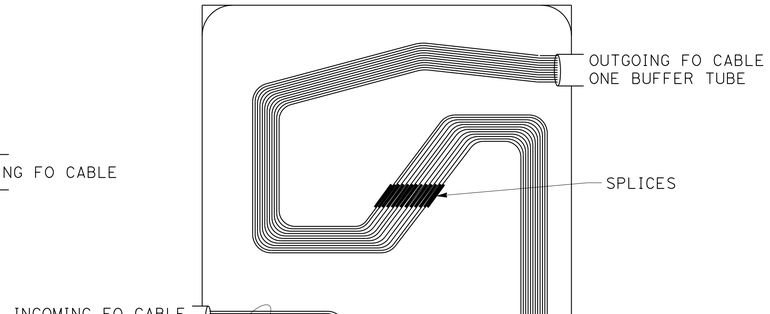


VAULT DETAIL



SPLICE ENCLOSURE DETAIL

ONLY 4 FIBER OPTIC SPLICE TRAYS SHOWN FOR CLARITY



FIBER OPTIC SPLICE TRAY DETAIL

FIBER OPTIC CABLE IN VAULT

APPROVED FOR MMBN WORK ONLY

MIDDLE MILE BROADBAND NETWORK DETAILS

(FIBER OPTIC CABLE SPLICING IN VAULT)

NO SCALE

MMBND-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN
FUNCTIONAL SUPERVISOR
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 5-OCT-2022
TIME PLOTTED => 11:29
09-29-22

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				10	21

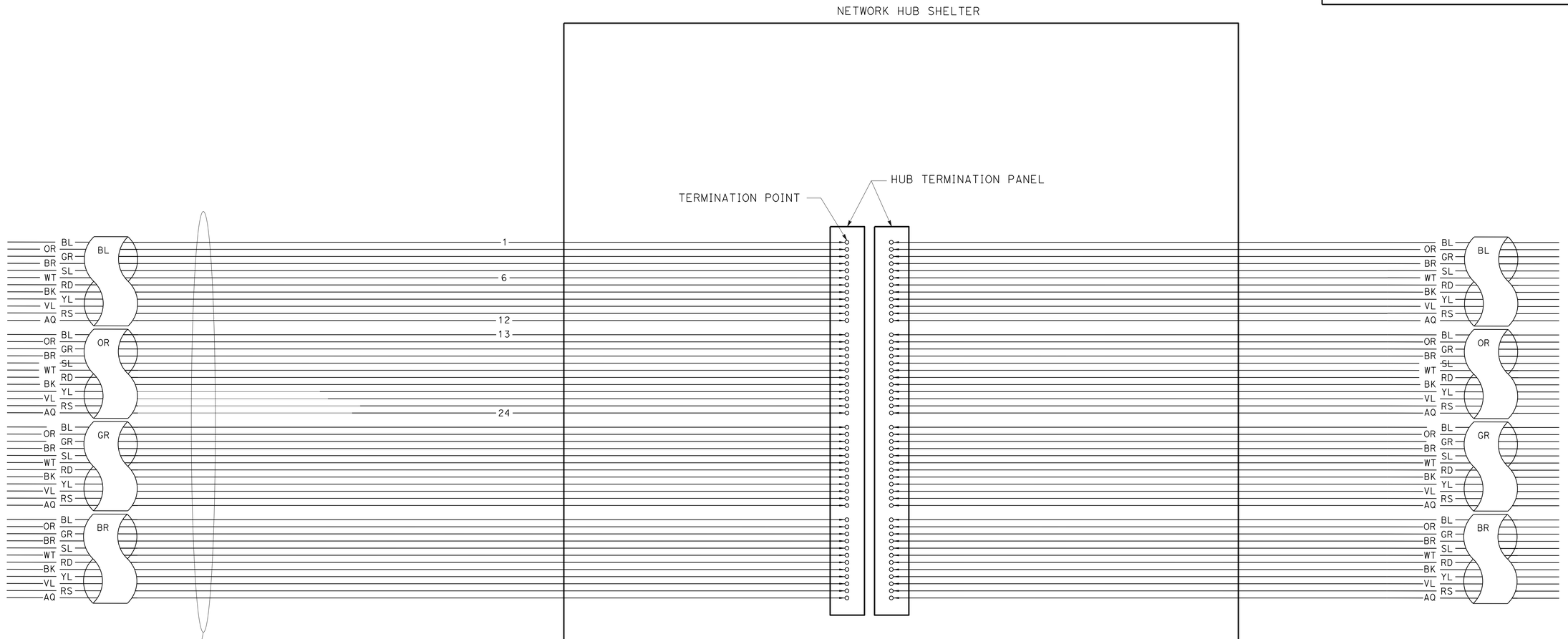
Ignacio Sánchez del Real 9-29-22
REGISTERED ELECTRICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Ignacio Sanchez del Real
No. E14926
Exp. 6-30-23
ELECTRICAL
STATE OF CALIFORNIA

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN



FIBER OPTIC CABLE AT TERMINATION PANEL

MIDDLE MILE BROADBAND NETWORK DETAILS

(TERMINATION PANEL)

NO SCALE

MMBND-10

APPROVED FOR MMBN WORK ONLY

LAST REVISION | DATE PLOTTED => 5-OCT-2022
09-29-22 | TIME PLOTTED => 11:29

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				11	21

Ignacio Sánchez del Real 9-29-22
REGISTERED ELECTRICAL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
Ignacio Sanchez del Real
No. E14926
Exp. 6-30-23
ELECTRICAL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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REVISED BY | DATE REVISED

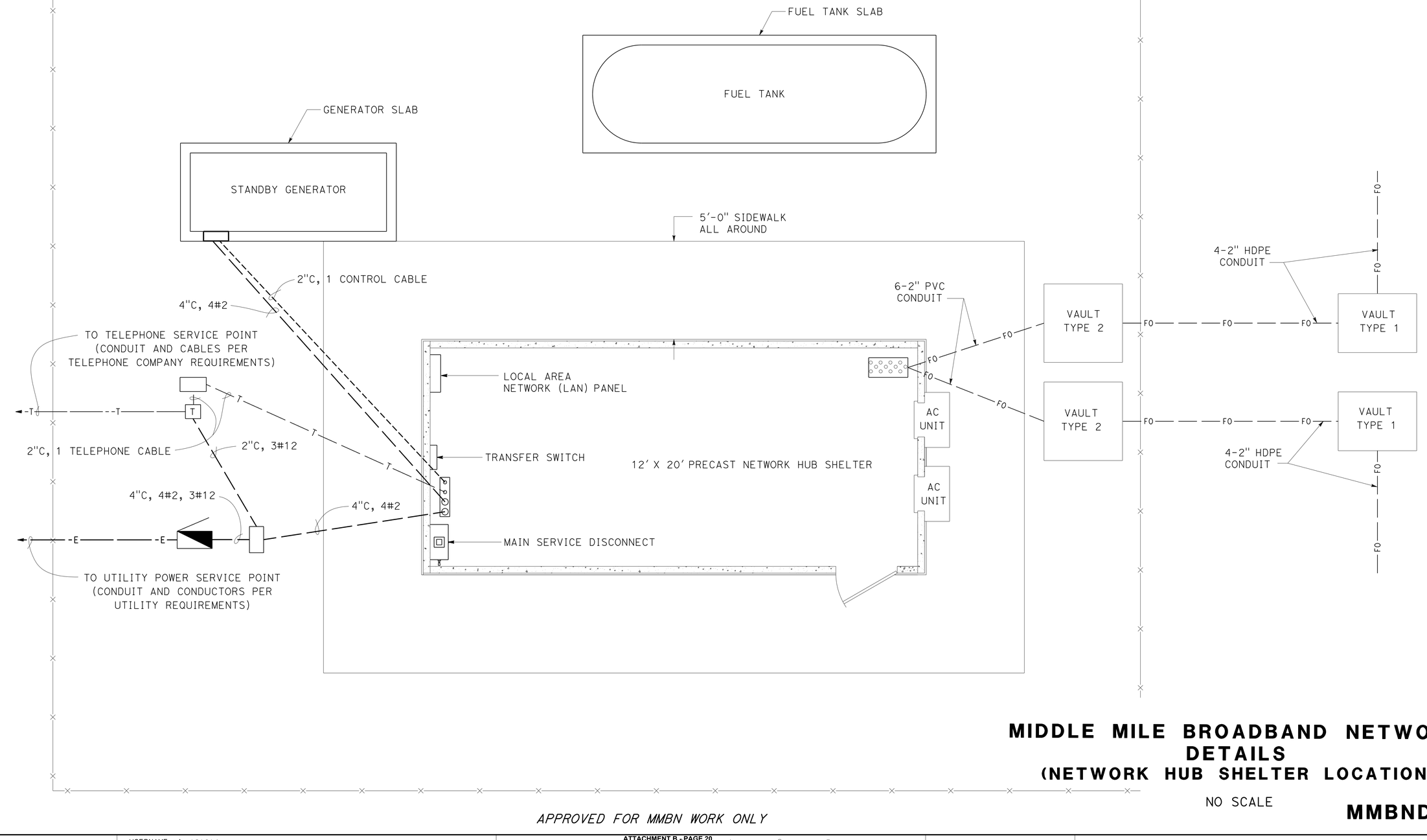
CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
ELECTRICAL DESIGN

NOTE:

1. INSTALL 8'-0" HIGH CYCLONE FENCE WITH LOOPED RAZOR WIRE ON TOP AROUND THE PERIMETER OF THE NETWORK HUB SHELTER LOCATION.



MIDDLE MILE BROADBAND NETWORK DETAILS
(NETWORK HUB SHELTER LOCATION)

NO SCALE

MMBND-11

APPROVED FOR MMBN WORK ONLY

LAST REVISION | DATE PLOTTED => 5-OCT-2022
09-29-22 | TIME PLOTTED => 11:29

BORDER LAST REVISED 7/2/2010

USERNAME => s121614
DGN FILE => 11of21-ub011_NetworkHubShelter_MMBND11.dgn

NOTES:

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1234

PROJECT NUMBER & PHASE 0

ATTACHMENT B

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				12	22

REGISTERED CIVIL ENGINEER — X — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — X — No. X — Exp. X — CIVIL — STATE OF CALIFORNIA

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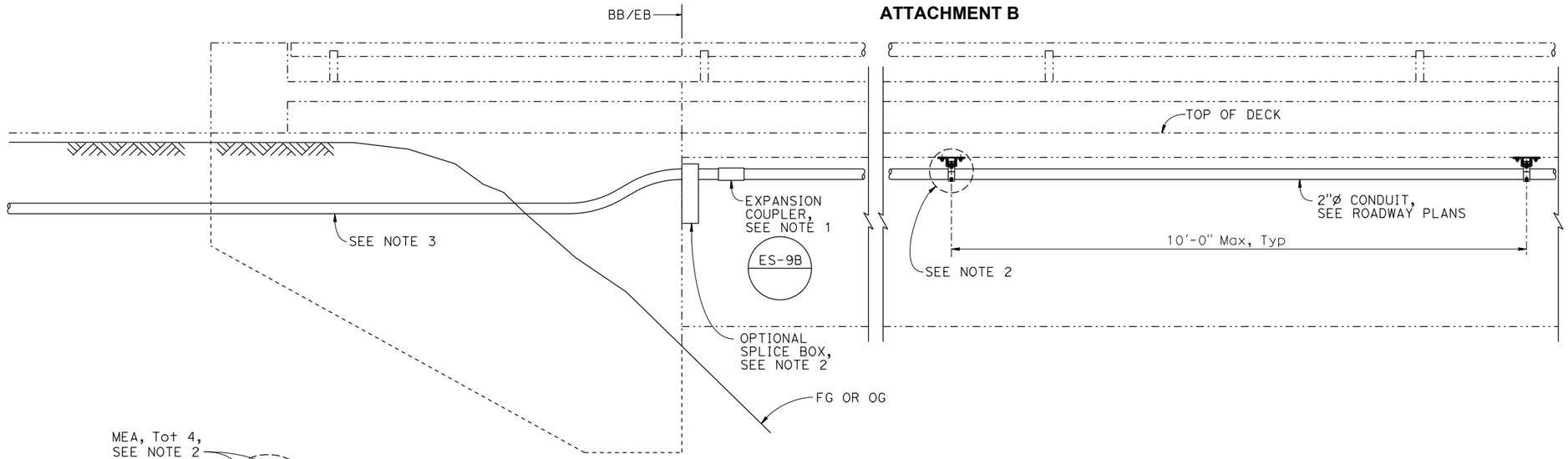
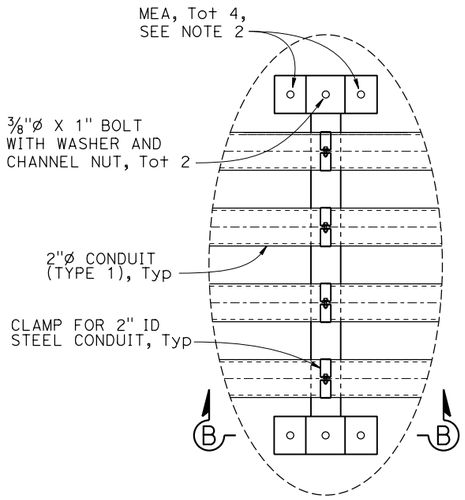
THE REGISTERED CIVIL ENGINEER FOR THE PROJECT IS RESPONSIBLE FOR THE SELECTION AND PROPER APPLICATION OF THE COMPONENT DESIGN AND ANY MODIFICATIONS SHOWN.

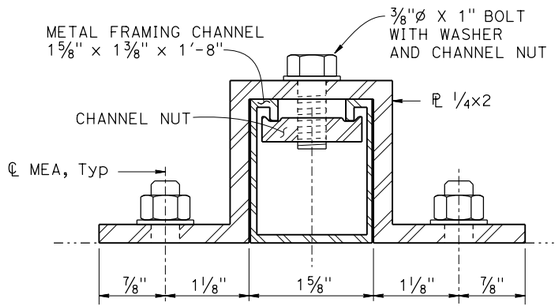


NOTE: Concrete Barrier (Type 1) shown, others similar.

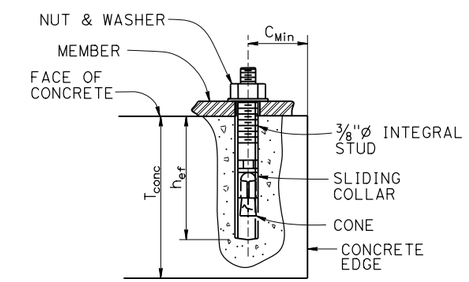
PART ELEVATION
NO SCALE



DETAIL A
3" = 1'-0"



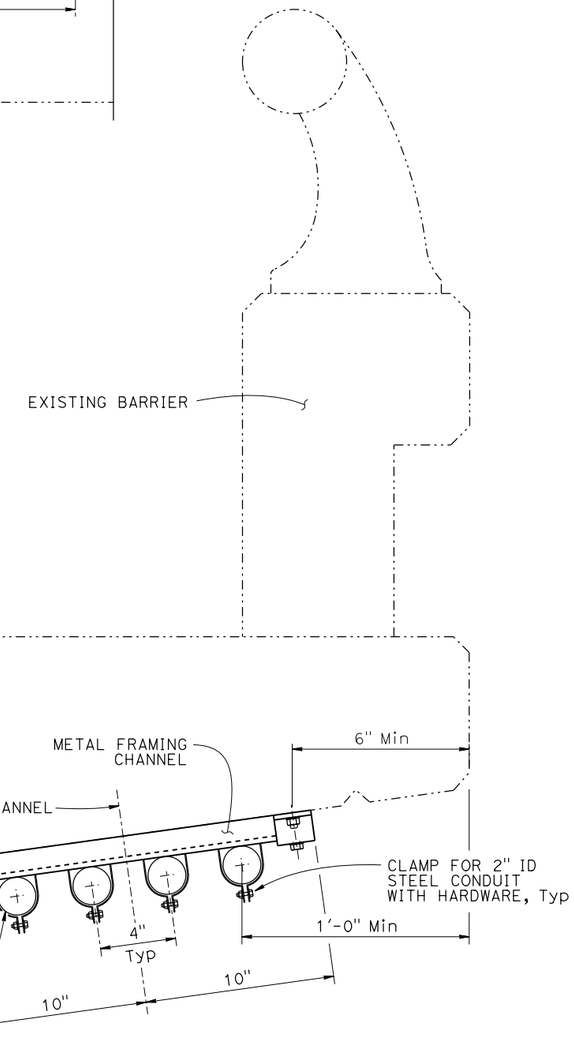
SECTION B-B
1" = 1'-0"



TYPICAL STUD TYPE (WEDGE)

MECHANICAL EXPANSION ANCHOR (MEA) BOLTS
NO SCALE

CONCRETE EXPANSION ANCHOR REQUIREMENTS			
Minimum Effective Embedment h_{ef} (in)	Minimum Concrete Thickness T_{conc} (in)	Minimum Edge Distance C_{Min} (in)	Minimum Anchor Spacing (in)
1.5	6	6	3



NOTE: Concrete barrier shown, others similar.

ATTACHMENT DETAIL
NO SCALE

LEGEND:
-·-·-·- Existing Structure
MEA - Mechanical Expansion Anchor

NOTES:
1. Expansion couplers shall be installed adjacent to BB, EB, joints or hinges (within 5 feet). Couplers must be able to handle up to 4 inches of longitudinal movement. Stagger couplers on either side of BB, EB, joints or hinges. At expansion couplers, add gradual field bends as needed.
2. For required conduit bend radius, splice box locations and other details not shown, see ROADWAY PLANS.

MMBND-12

BRIDGE STANDARD DETAILS		
xs20-010-1 (FILE NO.)	SEPTEMBER 2022 (APPROVAL DATE)	The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California

STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE No. XX-XXXX — POST MILE X.X

MIDDLE MILE BROADBAND NETWORK
COMMUNICATION CONDUIT (OVERHANG/SLAB)

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

DATE PLOTTED => 5-OCT-2022 — TIME PLOTTED => [illegible] — IN INCHES FOR REDUCED PLANS 0 1 2 3

FILE => xs20-010-1.dgn — USERNAME => s151015

UNIT: XXXX — PROJECT NUMBER & PHASE: XXXXXXXXXX1

COUNTY/ROUTE: XXX/XXX — CONTRACT No.: XX-XXXXX4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

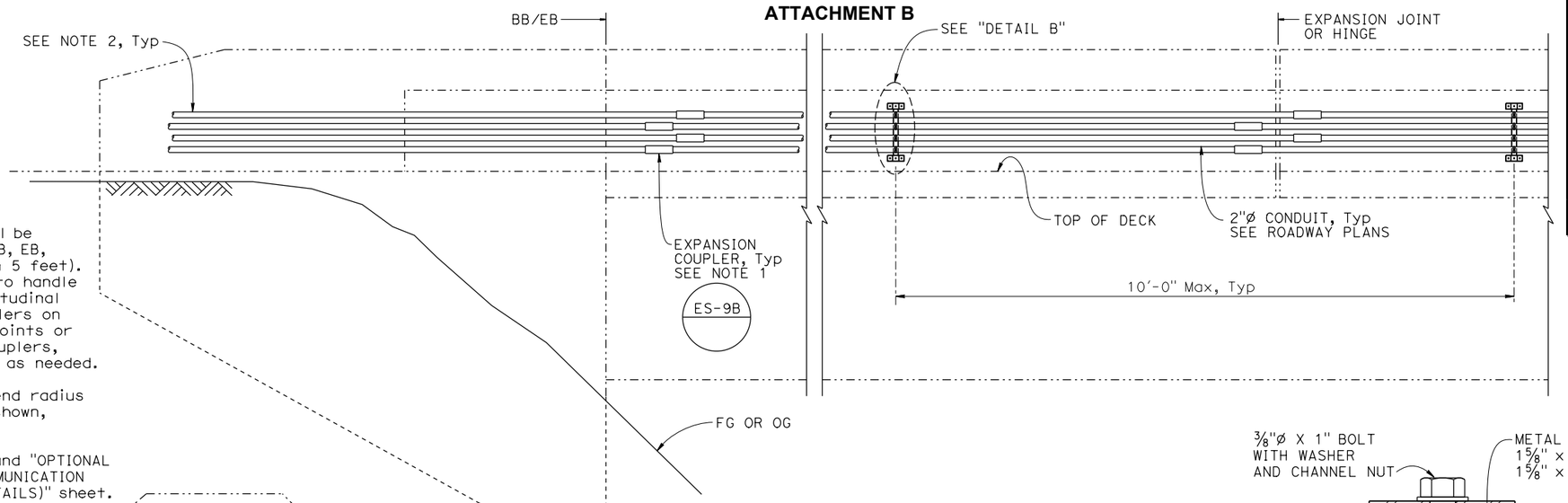
REVISION DATES	SHEET	OF
09-16-22	12	22

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				13	22

REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. X — Exp. X — CIVIL — STATE OF CALIFORNIA

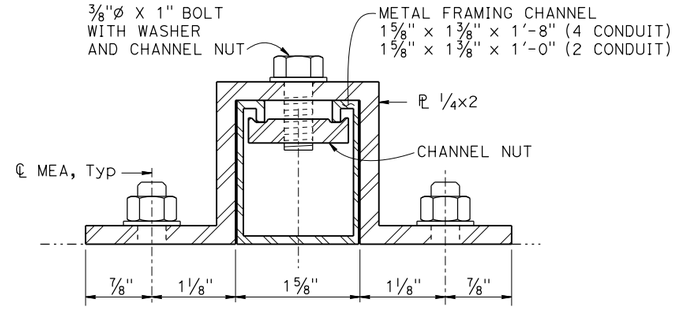


NOTES:
1. Expansion couplers shall be installed adjacent to BB, EB, joints or hinges (within 5 feet). Couplers must be able to handle up to 4 inches of longitudinal movement. Stagger couplers on either side of BB, EB, joints or hinges. At expansion couplers, add gradual field bends as needed.
2. For required conduit bend radius and other details not shown, see ROADWAY PLANS.
3. For additional details and "OPTIONAL COVER DETAIL", see "COMMUNICATION DETAILS (ATTACHMENT DETAILS)" sheet.

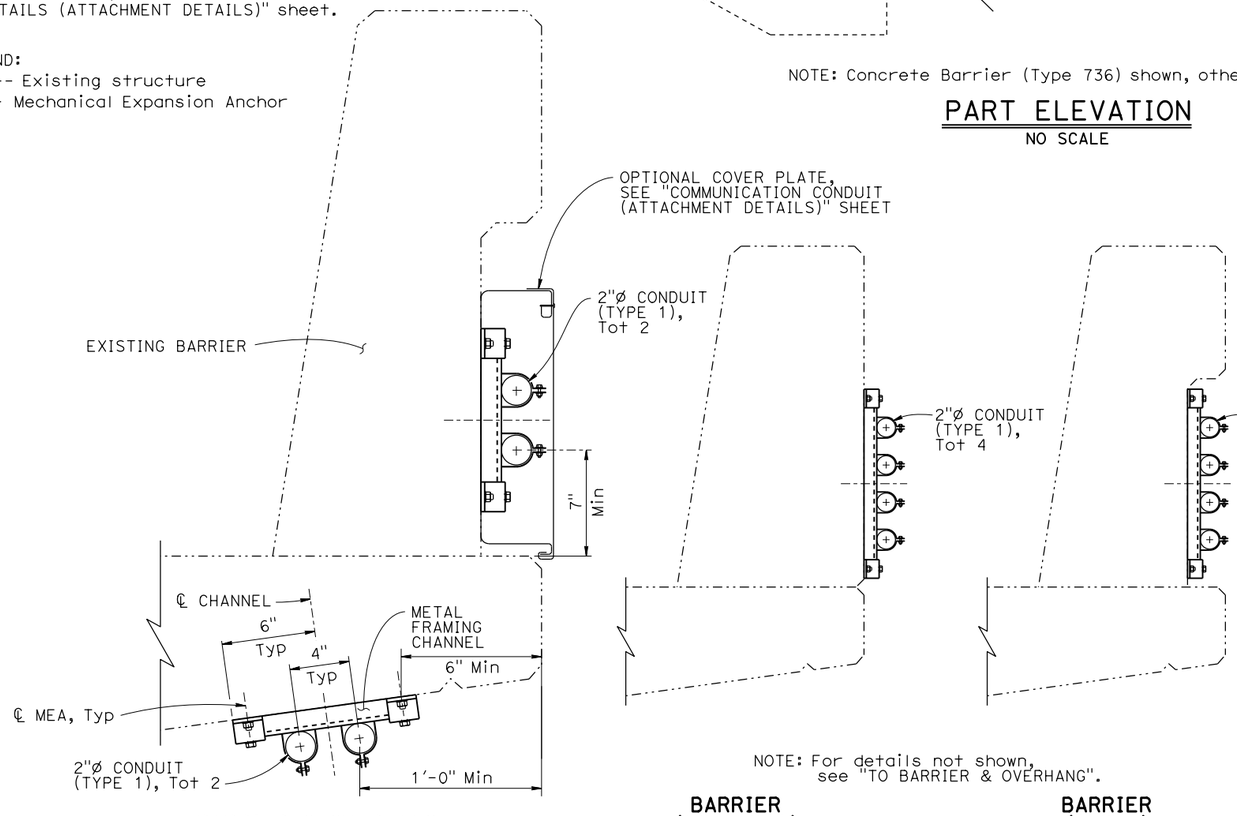
LEGEND:
-·-·-·- Existing structure
MEA - Mechanical Expansion Anchor

NOTE: Concrete Barrier (Type 736) shown, others similar.

PART ELEVATION
NO SCALE



SECTION C-C
1" = 1'-0"



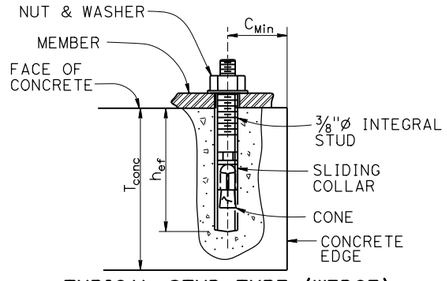
BARRIER & OVERHANG

BARRIER (NO INSET)

BARRIER (INSET)

NOTE: For details not shown, see "TO BARRIER & OVERHANG".

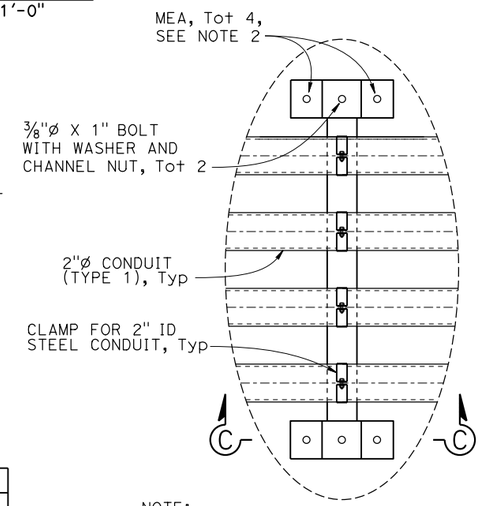
ATTACHMENT DETAIL
NO SCALE



TYPICAL STUD TYPE (WEDGE)

MECHANICAL EXPANSION ANCHOR (MEA) BOLTS
NO SCALE

CONCRETE EXPANSION ANCHOR REQUIREMENTS			
Minimum Effective Embedment h_{ef} (in)	Minimum Concrete Thickness T_{conc} (in)	Minimum Edge Distance C_{Min} (in)	Minimum Anchor Spacing (in)
1.5	6	6	3



NOTE:
Mounting assembly for 4 conduits shown, mounting assembly for 2 conduits similar.

DETAIL B
3" = 1'-0"

MMBND-13

BRIDGE STANDARD DETAILS		
xs20-010-2 (FILE NO.)	SEPTEMBER 2022 (APPROVAL DATE)	*The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California*

STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE No. XX-XXXX — POST MILE X.X

MIDDLE MILE BROADBAND NETWORK
COMMUNICATION CONDUIT (BARRIER)

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

DATE PLOTTED => 5-OCT-2022 TIME PLOTTED => [illegible]
FILE => xs20-010-2.dgn USERNAME => s151015
ORIGINAL PAPER SIZE IS 34 INCHES BY REDUCED PLANS 0 1 2 3

UNIT: XXXX
PROJECT NUMBER & PHASE: XXXXXXXXXX1
COUNTY/ROUTE: XXX/XXX
CONTRACT No.: XX-XXXX4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
09-16-22	13	22

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				14	22

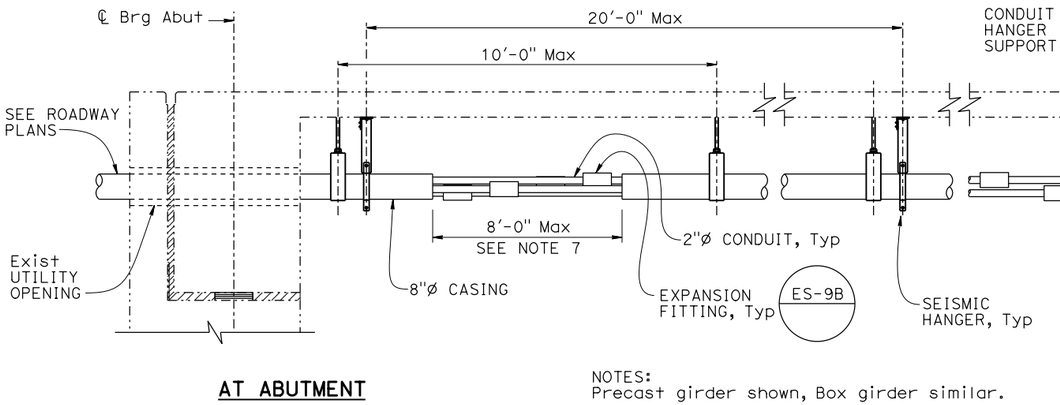
REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

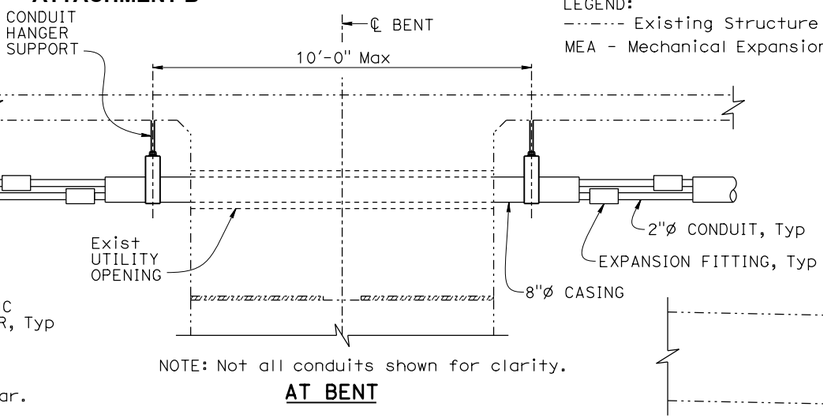
REGISTERED PROFESSIONAL ENGINEER — No. X, Exp. X, CIVIL, STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

THE REGISTERED CIVIL ENGINEER FOR THE PROJECT IS RESPONSIBLE FOR THE SELECTION AND PROPER APPLICATION OF THE COMPONENT DESIGN AND ANY MODIFICATIONS SHOWN.



AT ABUTMENT



NOTE: Not all conduits shown for clarity.

AT BENT

NOTES:
Precast girder shown, Box girder similar.

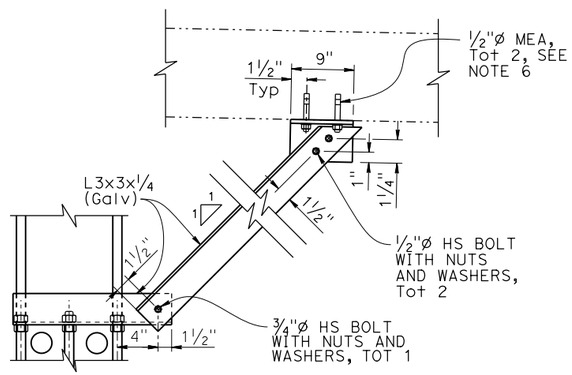
LEGEND:
------ Existing Structure
MEA - Mechanical Expansion Anchor

PART ELEVATION

NO SCALE

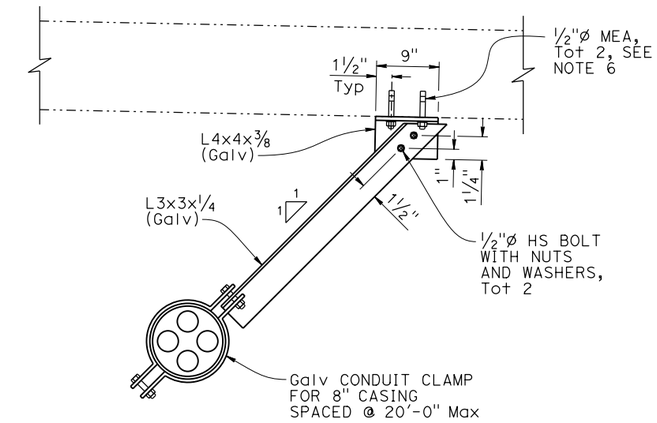
NOTES:

1. Expansion couplers shall be installed adjacent to BB, EB, joints or hinges (within 5 feet). Couplers must be able to handle up to 4 inches of longitudinal movement. Stagger couplers on either side of BB, EB, joints or hinges.
2. For required conduit bend radius and locations, see ROADWAY PLANS.
3. Details for the conduit inside the structure are applicable when the existing structure has a future utility opening.
4. For additional details and "ATTACHMENT DETAIL", see "COMMUNICATION DETAILS (ATTACHMENT DETAILS)" sheet.
5. Conduit hanger details depend on conduit size and layout shown in ROADWAY PLANS. Details shown can be used for all steel girder, precast girder or T-Beam structures.
6. Mechanical expansion anchors to be approved by Engineer.
7. Casing (8"ø) ends at all locations of (2"ø conduit) expansion fittings. Maximum gap between casings is 8'-0".
8. Access openings may be added as required.



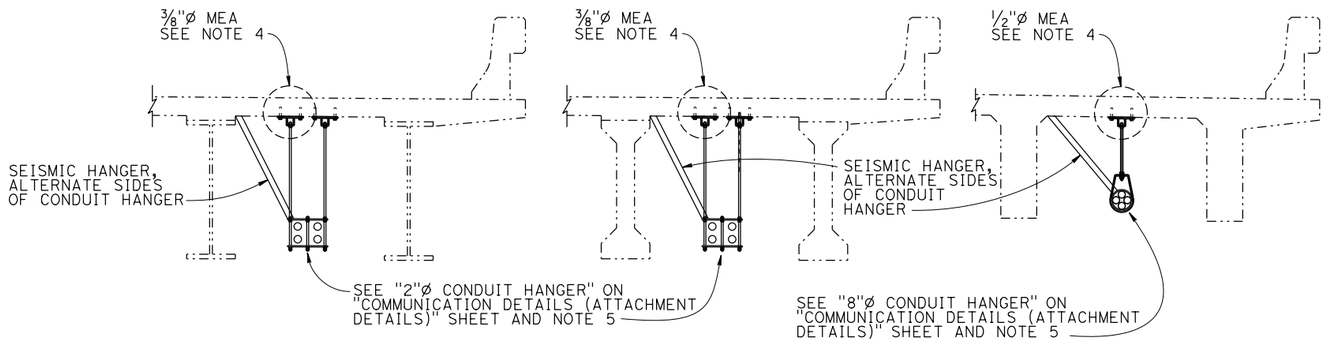
SEISMIC HANGER DETAIL 4 - 2"ø CONDUIT HANGER

NO SCALE



SEISMIC HANGER DETAIL - 8"ø CASING

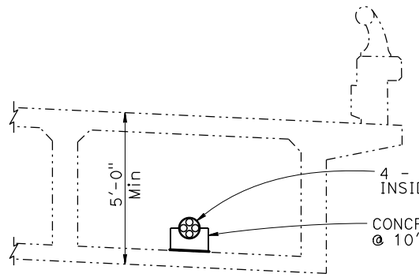
NO SCALE



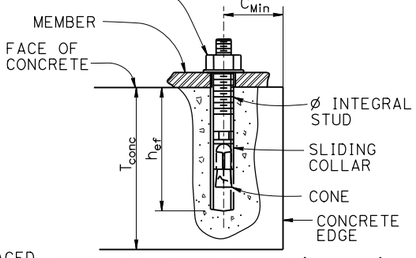
STEEL GIRDER BRIDGE OR PC GIRDER BRIDGE OR T-BEAM BRIDGE

ATTACHMENT TO BRIDGE

NO SCALE



BOX GIRDER BRIDGE (B14-3)
See NOTE 3



TYPICAL STUD TYPE (WEDGE)

MECHANICAL EXPANSION ANCHOR (MEA) BOLTS

NO SCALE

CONCRETE EXPANSION ANCHOR REQUIREMENTS				
Anchor Diameter (in)	Minimum Effective Embedment h_{ef} (in)	Minimum Concrete Thickness T_{conc} (in)	Minimum Edge Distance C_{Min} (in)	Minimum Anchor Spacing (in)
½"*	2	6	4	6
	3.25	6	4	4
⅜"	1.5	6	6	3

* = CONTRACTOR'S OPTION TO USE EITHER EMBEDMENT DEPTH FOR ½" ANCHOR.

MMBND-14

BRIDGE STANDARD DETAILS		
xs20-010-3 (FILE NO.)	SEPTEMBER 2022 (APPROVAL DATE)	The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. XX-XXXX
POST MILE X.X

MIDDLE MILE BROADBAND NETWORK

COMMUNICATION CONDUIT (Exist UTILITY OPENING)

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

DATE PLOTTED => 5-OCT-2022 TIME PLOTTED => 13:41
FILE => xs20-010-3.dgn USERNAME => s151015
ORIGINAL SHEET SIZE IS 34" X 22" FOR REDUCED PLANS 0 1 2 3

UNIT: XXXX
PROJECT NUMBER & PHASE: XXXXXXXXXX1
COUNTY/ROUTE: XXX/XXX
CONTRACT No.: XX-XXXX4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
09-16-22	14	22

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				15	22

REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. X, Exp. X, CIVIL — STATE OF CALIFORNIA

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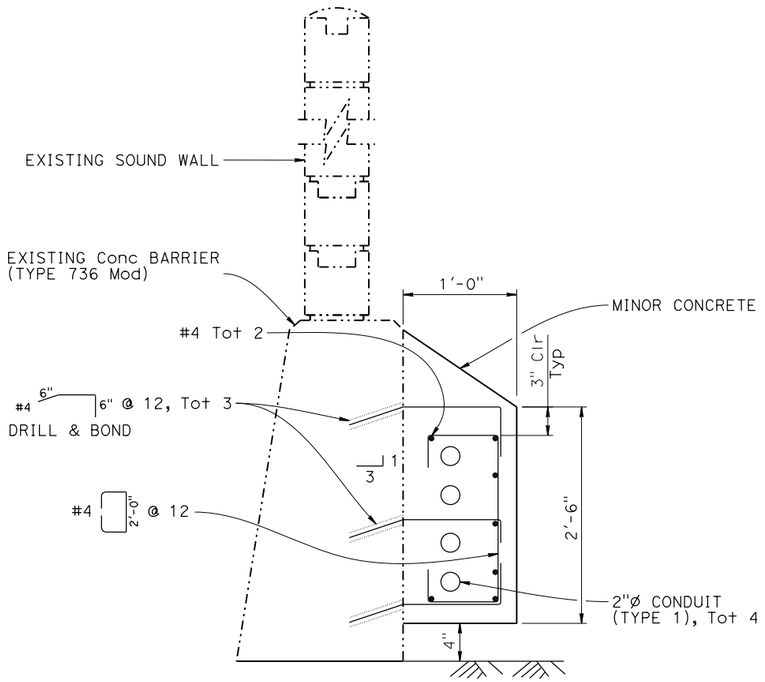
THE REGISTERED CIVIL ENGINEER FOR THE PROJECT IS RESPONSIBLE FOR THE SELECTION AND PROPER APPLICATION OF THE COMPONENT DESIGN AND ANY MODIFICATIONS SHOWN.

LEGEND:

–·–·–·– Existing Structure

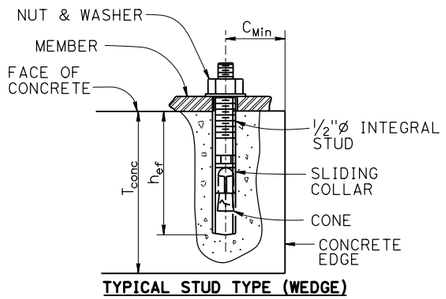
MEA - MECHANICAL EXPANSION ANCHOR



ATTACHMENT TO SOUNDWALL

NO SCALE

NOTE: This detail not to be used on bridges.



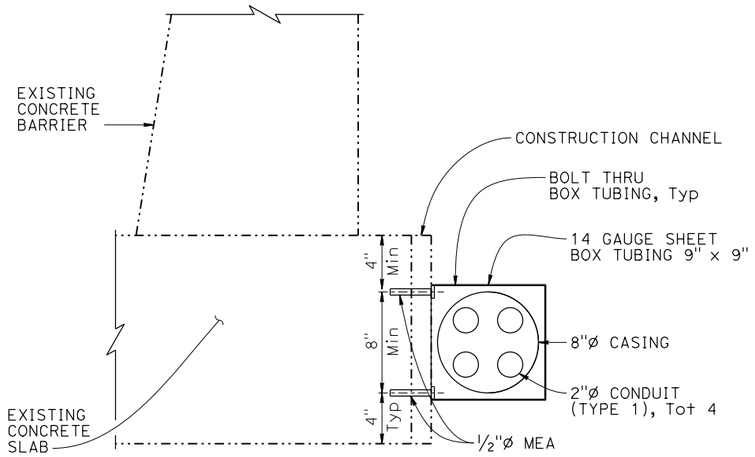
TYPICAL STUD TYPE (WEDGE)

MECHANICAL EXPANSION ANCHOR (MEA) BOLTS

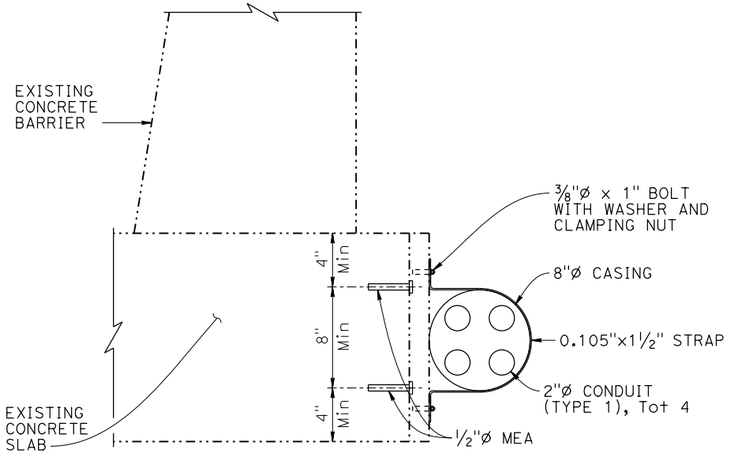
NO SCALE

CONCRETE EXPANSION ANCHOR REQUIREMENTS				
Anchor Diameter (in)	Minimum Effective Embedment h_{ef} (in)	Minimum Concrete Thickness T_{conc} (in)	Minimum Edge Distance C_{Min} (in)	Minimum Anchor Spacing (in)
½"*	2	6	4	6
	3.25	6	4	4

* = CONTRACTOR'S OPTION TO USE EITHER EMBEDMENT DEPTH FOR ½" ANCHOR.



BOX TUBE



STRAP DETAIL

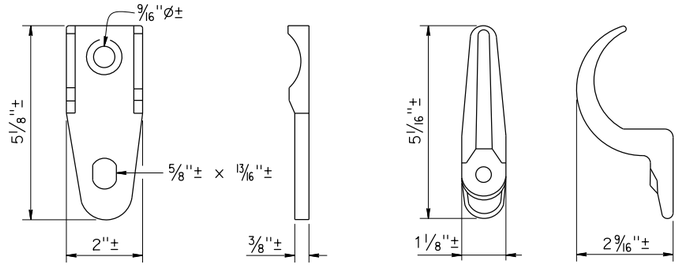
CONCRETE CASING DETAIL

2" = 1'-0"

NOTE: For "EXPANSION COUPLER PLAN", see "COMMUNICATION CONDUIT (ATTACHMENT DETAILS") sheet.

NOTES:

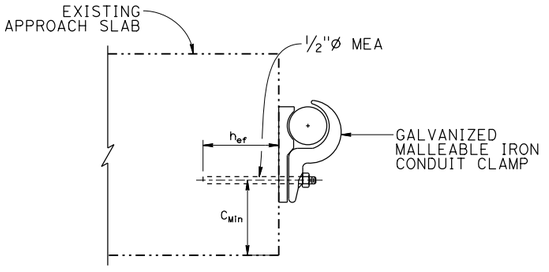
1. All attachments to any structure must remain within State Right-of-Way. To avoid encroachment outside of State Right-of-Way, refer to ROADWAY PLANS.
2. When existing utilities are located inside a barrier, drill and bond dowels are not allowed.
3. If scuppers are encountered, move bottom drill and bond dowel (beyond the limits of scupper) at least 4 inches.
4. Use aggregate with maximum diameter of ⅜" to minimize rock pockets in minor concrete.
5. For attachment to retaining walls, install expansion fittings at each expansion joint.
6. All mounting hardware used shall be corrosion resistant.



2" CLAMP BACK — 2" CONDUIT CLAMP

CONDUIT CLAMP DETAIL

NO SCALE



ATTACHMENT TO SLAB OR CULVERT DETAIL

NO SCALE

MMBND-15

BRIDGE STANDARD DETAILS		
xs20-010-4 (FILE NO.)	SEPTEMBER 2022 (APPROVAL DATE)	The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California

STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE No.	MIDDLE MILE BROADBAND NETWORK
XX-XXXX	
POST MILE X.X	COMMUNICATION CONDUIT (SOUNDWALL/Exist CONCRETE)

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-details/index.html

DATE PLOTTED => 5-OCT-2022 TIME PLOTTED => XX:XX
FILE => xs20-010-4.dgn USERNAME => s151015

ALL PLANS ARE 11" X 17" REDUCED PLANS 0 1 2 3

UNIT: XXXX
PROJECT NUMBER & PHASE: XXXXXXXXXX1

COUNTY/ROUTE: XXX/XXX
CONTRACT No.: XX-XXXXX4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
				15	22

ATTACHMENT B

LEGEND:

-·-·-·- Existing Structure

MEA - Mechanical Expansion Anchor

NOTES:

1. All mounting hardware used shall be corrosion resistant.
2. Mounting Bracket and other cradle plates shall be galvanized after fabrication.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
				16	22

REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. X — Exp. X — CIVIL — STATE OF CALIFORNIA

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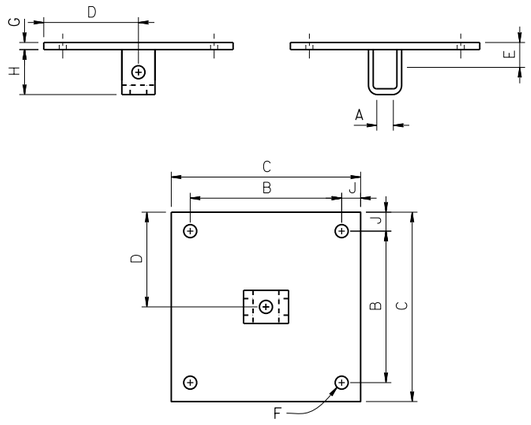
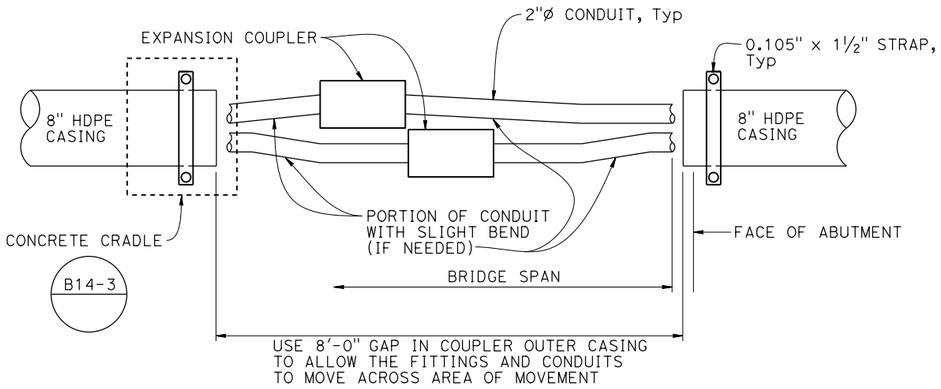
THE REGISTERED CIVIL ENGINEER FOR THE PROJECT IS RESPONSIBLE FOR THE SELECTION AND PROPER APPLICATION OF THE COMPONENT DESIGN AND ANY MODIFICATIONS SHOWN.

THREADED ROD SIZE "A"	B	C	D	E	F	G	H	J
¾"	8"	10"	5"	2¼"	11/16"	½"	3⅜"	1"
⅞"	8"	10"	5"	3⅛"	11/16"	½"	4¼"	1"



MOUNTING BRACKET

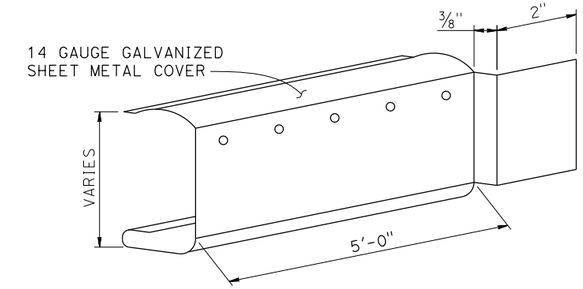
NO SCALE



EXPANSION COUPLER PLAN

NO SCALE

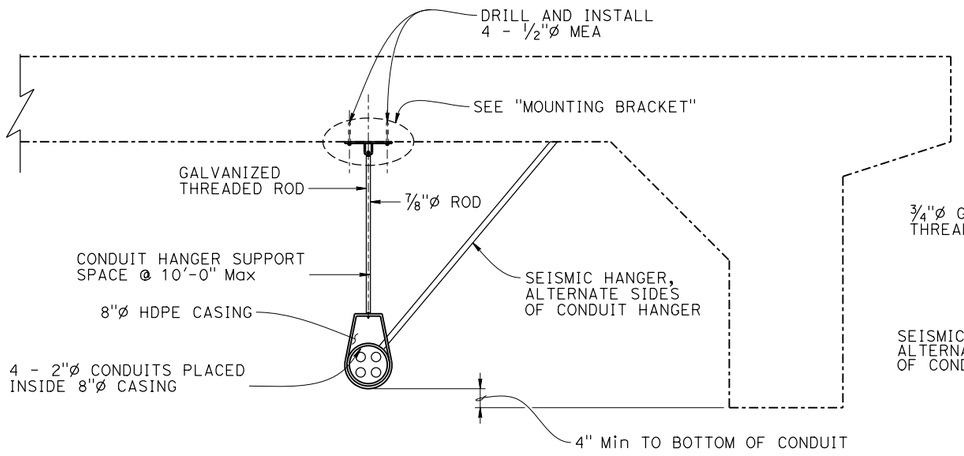
NOTE: Not all conduits or expansion couplers shown.



OPTIONAL COVER DETAIL

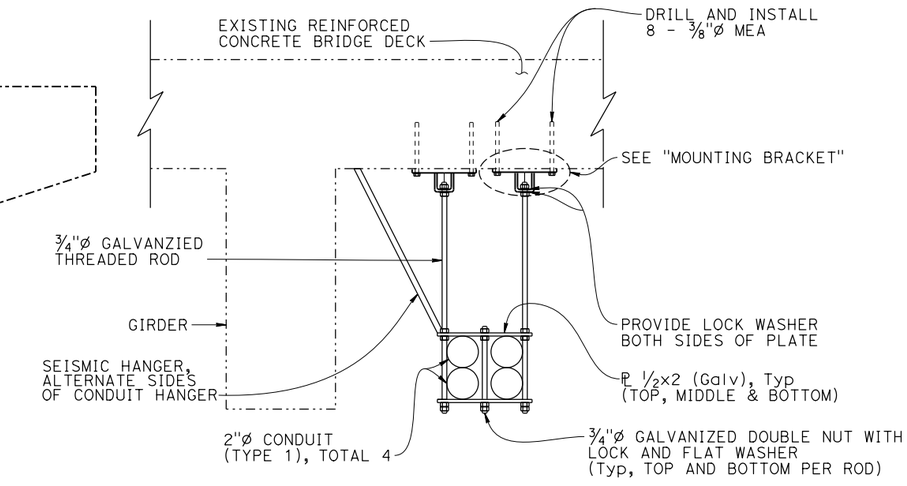
NO SCALE

NOTE: Use cover only if conduit is mounted on concrete barrier in a recessed location.

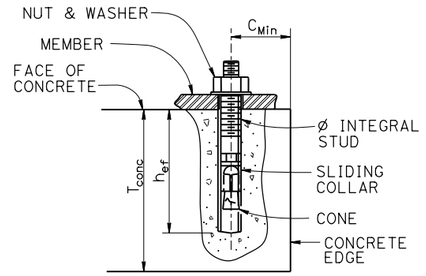


8"ø CONDUIT HANGER

NOTE: For details not shown, see "2"ø CONDUIT HANGER".



2"ø CONDUIT HANGER



TYPICAL STUD TYPE (WEDGE)

MECHANICAL EXPANSION ANCHOR (MEA) BOLTS

NO SCALE

CONCRETE EXPANSION ANCHOR REQUIREMENTS				
Anchor Diameter (in)	Minimum Effective Embedment h_{ef} (in)	Minimum Concrete Thickness T_{conc} (in)	Minimum Edge Distance C_{Min} (in)	Minimum Anchor Spacing (in)
½"*	2	6	4	6
	3.25	6	4	4
⅜"	1.5	6	6	3

* = CONTRACTOR'S OPTION TO USE EITHER EMBEDMENT DEPTH FOR ½" ANCHOR.

CONDUIT HANGER SUPPORT DETAILS

NO SCALE

MMBND-16

BRIDGE STANDARD DETAILS		
xs20-010-5 (FILE NO.)	SEPTEMBER 2022 (APPROVAL DATE)	*The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California*

STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE No. XX-XXXX

POST MILE X.X

MIDDLE MILE BROADBAND NETWORK

COMMUNICATION CONDUIT ATTACHMENT DETAILS

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

DATE PLOTTED => 5-OCT-2022 TIME PLOTTED => 13:37

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ORIGINAL PLOT SIZE IS 11 X 17 INCHES — REDUCED PLANS 0 1 2 3

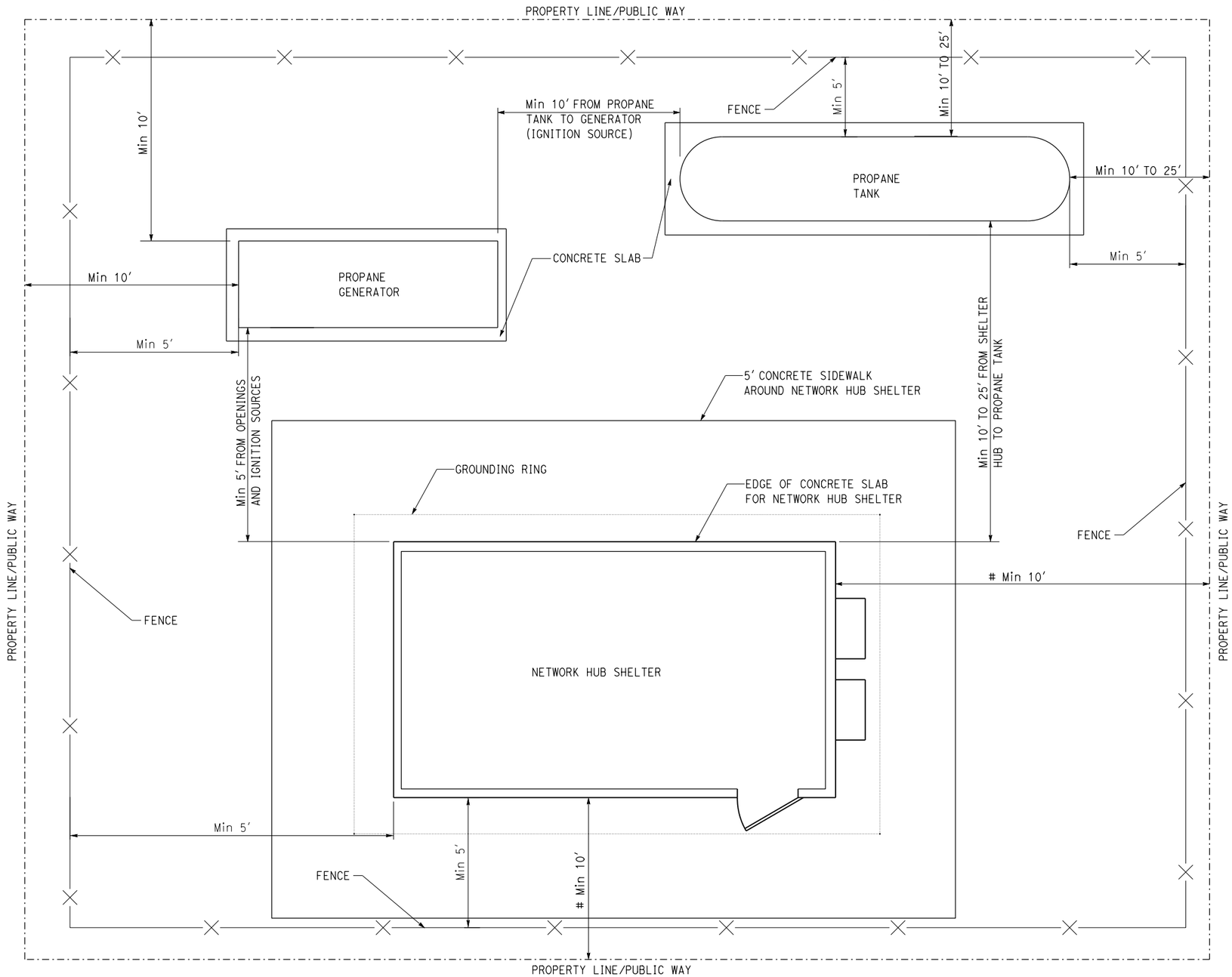
UNIT: XXXX PROJECT NUMBER & PHASE: XXXXXXXXXX1

COUNTY/ROUTE: XXX/XXX CONTRACT No.: XX-XXXX4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES

SHEET 16 OF 22



NOTES:

1. Vaults, vehicle impact protection, driveways, gates, access points, electrical cabinet, meter location, etc. are not shown for clarity and may impact overall site space requirements.
2. Additional setbacks and other requirements may be necessary (by code and/or the state fire marshal) if existing structures or over head structures are present on the site.

ABOVE GROUND PROPANE TANK SET BACK REQUIREMENTS

SIZE	TO PUBLIC WAY/ PROPERTY LINE	TO BUILDING	TO GENERATOR
<500 Gal	10'	10'	10'
>501 TO 2,000 Gal	25'	25'	10'

BELOW GROUND PROPANE TANK SET BACK REQUIREMENTS

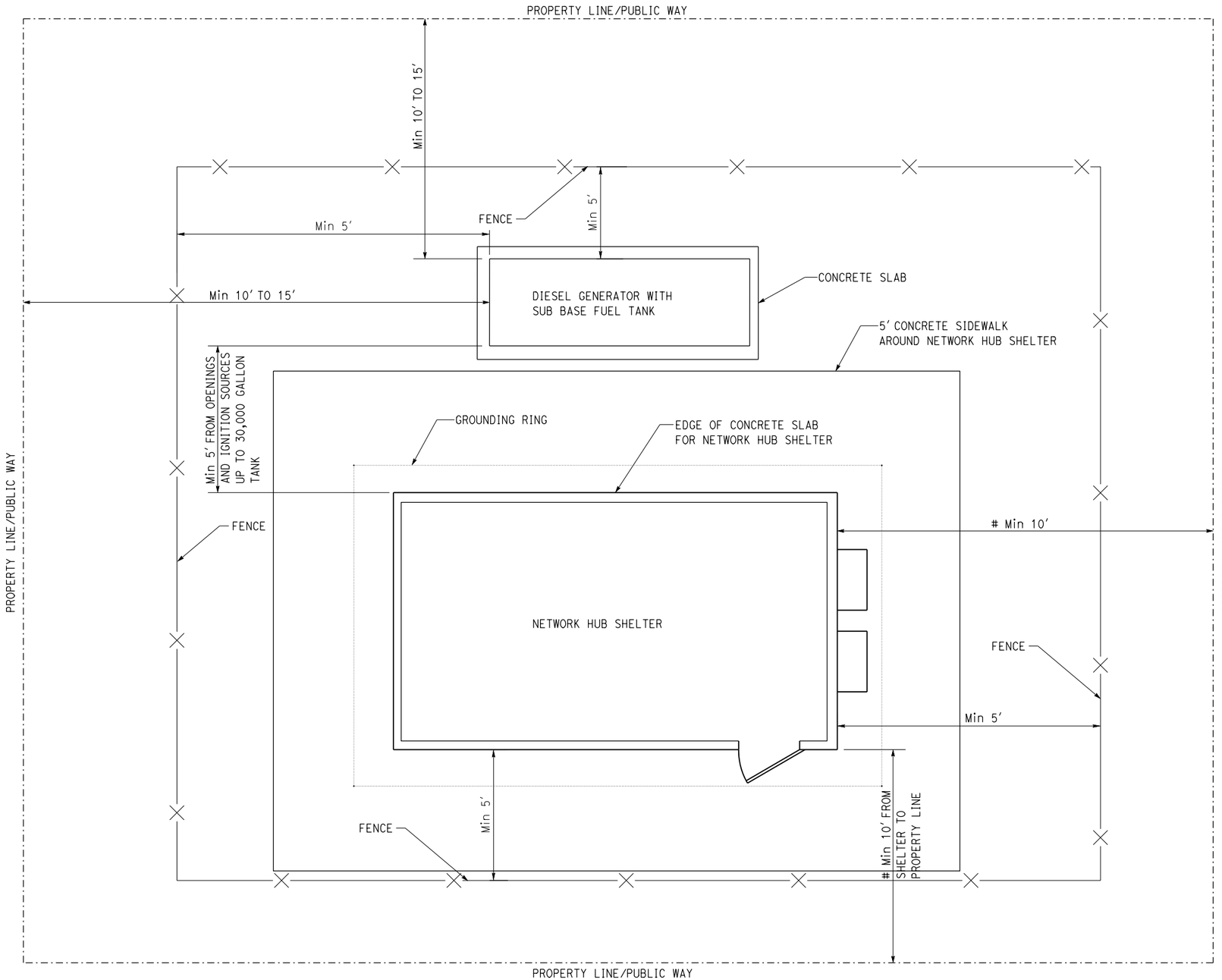
SIZE	TO PUBLIC WAY/ PROPERTY LINE	TO BUILDING	TO GENERATOR
<500 Gal	10'	10'	10'
>501 TO 2,000 Gal	10'	10'	10'

DISTANCE FROM NETWORK HUB SHELTER TO PROPERTY LINE MAY VARY TO ACCOMMODATE VEHICLE (EMERGENCY, FUELING AND MAINTENANCE) ACCESS. PROVIDE 20' WIDE ACCESS LANE, MAXIMUM 150' LONG ACCESS LANE, UNLESS A TURN AROUND OR THROUGH WAY PROVIDED

MIDDLE MILE BROADBAND NETWORK
NETWORK HUB SHELTER WITH
PROPANE GENERATOR SITE PLAN TYPICAL

NO SCALE

MMBND-17



NOTES:

1. Fencing, vaults, vehicle impact protection, driveways, gates, access points, electrical cabinet, meter location, etc. are not shown for clarity and may impact overall site space requirements.
2. Additional setbacks and other requirements may be necessary (BY CODE AND/OR THE STATE FIRE MARSHALL) if existing structures or over head structures are present on the site.

SUB BASE DIESEL FUEL TANK SET BACK REQUIREMENTS

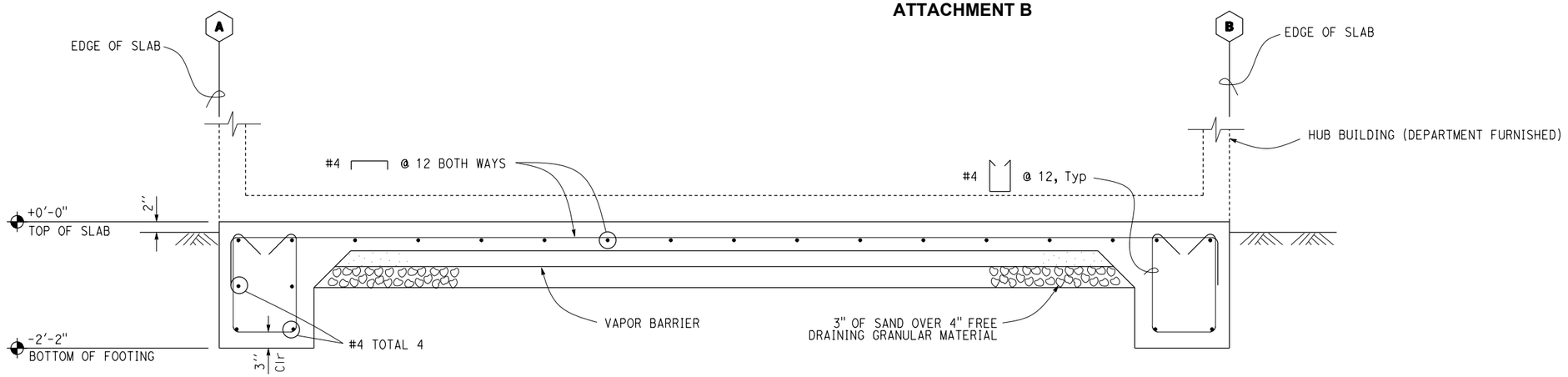
SIZE	TO PUBLIC WAY/ PROPERTY LINE	TO BUILDING
<750 Gal	10'	5'
>751 TO 12,000 Gal	15'	5'

DISTANCE FROM NETWORK HUB SHELTER TO PROPERTY LINE MAY VARY TO ACCOMMODATE VEHICLE (EMERGENCY, FUELING AND MAINTENANCE) ACCESS. PROVIDE 20' WIDE ACCESS LANE, MAXIMUM 150' LONG ACCESS LANE, UNLESS A TURN AROUND OR THROUGH WAY PROVIDED

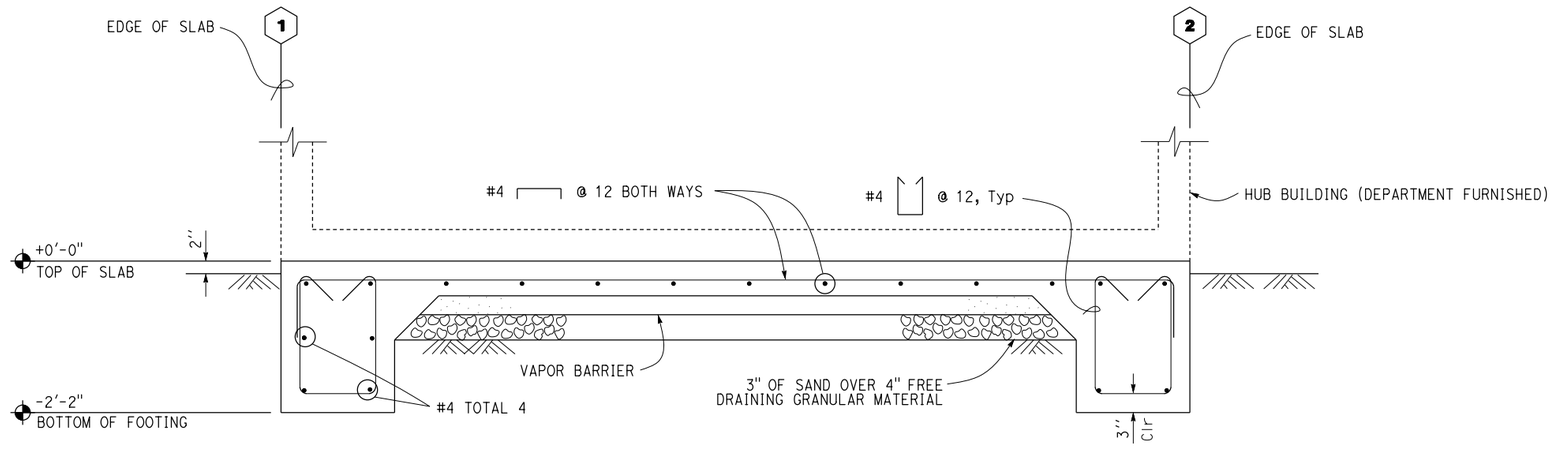
MIDDLE MILE BROADBAND NETWORK
NETWORK HUB SHELTER WITH
DIESEL GENERATOR SITE PLAN TYPICAL

NO SCALE

MMBND-18



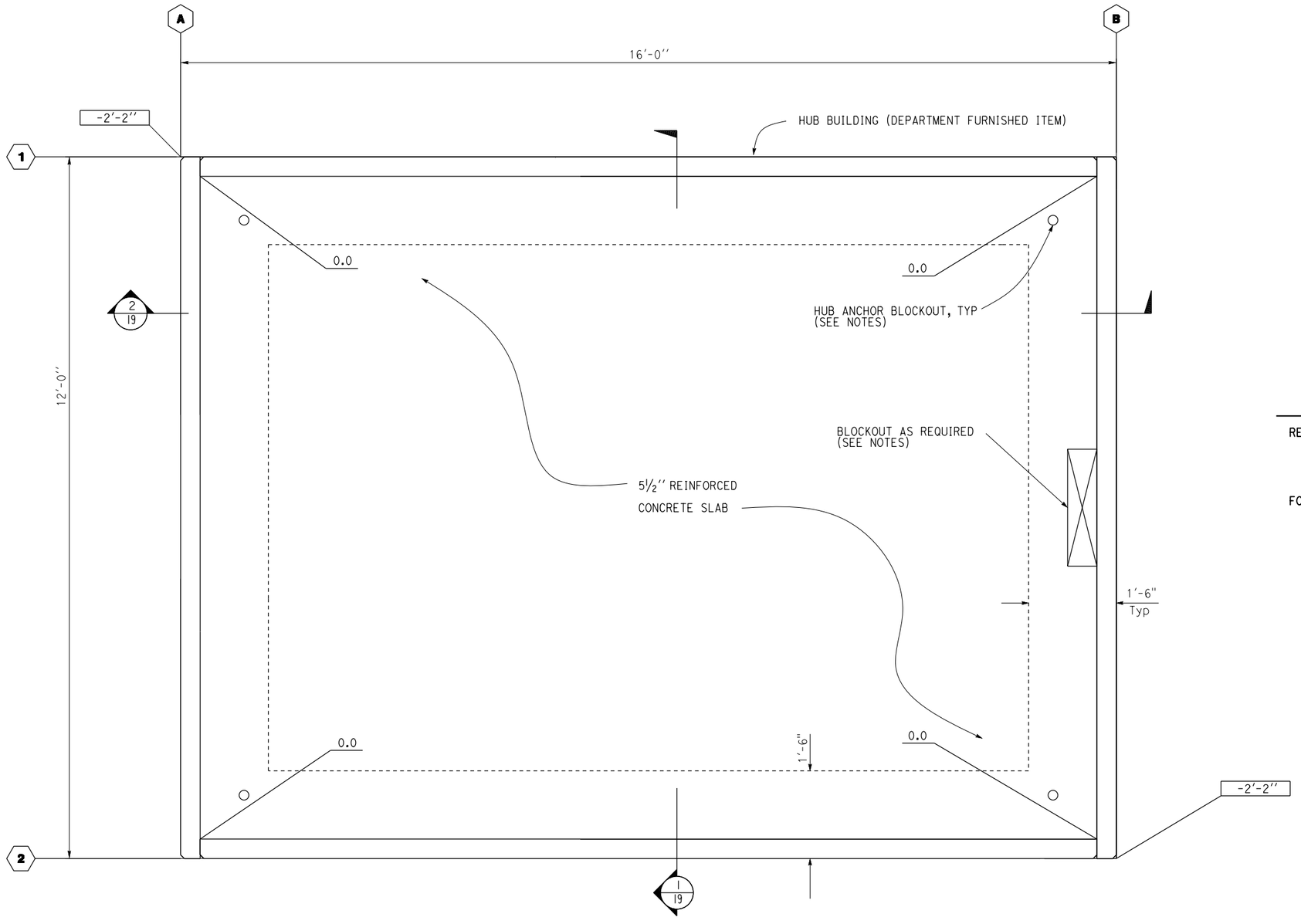
1 LONGITUDINAL SECTION
1" = 1'-0"



2 TRANSVERSE SECTION
1" = 1'-0"

MIDDLE MILE BROADBAND NETWORK
NETWORK HUB SHELTER FOUNDATION DETAILS

MMBND - 19



DATUM 0.0 = ELEVATION XXXX.XX

1 FOUNDATION PLAN
1" = 1'-0"

NOTES

1. SIZE AND LOCATION OF BLOCKOUT(S) FOR POWER & CABLE ENTRY TO BE DETERMINED.
2. HUB ANCHORS (SIZE, LOCATION AND NUMBER) TO BE COORDINATED WITH HUB BULDING MANUFACTURER
3. SIDEWALK NOT SHOWN FOR CLARITY. SEE SITE PLAN
4. FOR LOCATION AND ORIENTATION OF SLABS, SEE INDIVIDUALS SITE PLANS.
5. FOR GROUNDING DETAILS, COORDINATE WITH MANUFACTURER AND OTHERS.

PROJECT DESIGN CRITERIA

The building work on this project has been designed to conform to the 2019 California Building Code (2018 IBC).

REINFORCED CONCRETE: (Ultimate Strength Design) :
$f'c$ = 3,600 psi
f_y = 60,000 psi

FOUNDATION:
Soils report dated :XXX XX, 20XX
Allowable Soil Pressure (DL + LL) : = 1,500 psf
For Soil Classification, see Log of Test Boring Sheets.

MIDDLE MILE BROADBAND NETWORK
NETWORK HUB SHELTER 12X16 FOUNDATION PLAN

MMBND - 20

TAEMWW Imperial - CCSC Rev. 12/20

ORIGINAL DRAWING IS 36 X 24 INCHES
FOR REDUCED PLANS 0 1 2 3

UNIT: 0000 CONTRACT No.: 00-000004
PROJECT NUMBER & PHASE: 00000000001

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)							VERSION	SHEET	OF
09-20-22	09-26-22	09-29-22					V1	20	22

29-SEP-2022 13:03

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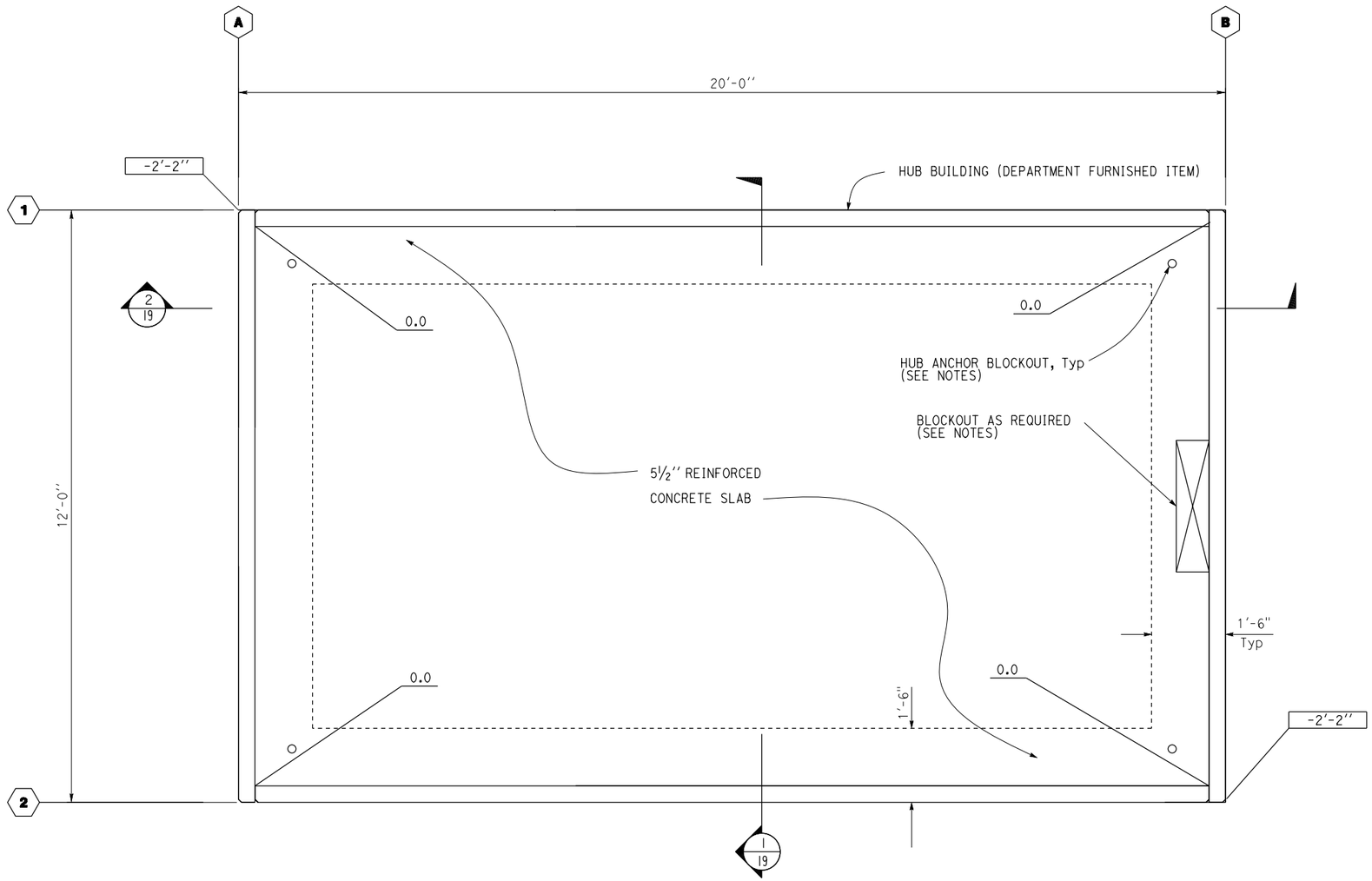

DATUM 0.0 = ELEVATION XXXX.XX

1 FOUNDATION PLAN
¾" = 1'-0"

NOTES

1. SIZE AND LOCATION OF BLOCKOUT(S) FOR POWER & CABLE ENTRY TO BE DETERMINED.
2. HUB ANCHORS (SIZE, LOCATION AND NUMBER) TO BE COORDINATED WITH HUB BULDING MANUFACTURER
3. SIDEWALK NOT SHOWN FOR CLARITY. SEE SITE PLAN
4. FOR LOCATION AND ORIENTATION OF SLABS, SEE INDIVIDUALS SITE PLANS.
5. FOR GROUNDING DETAILS, COORDINATE WITH MANUFACTURER AND OTHERS.

PROJECT DESIGN CRITERIA

The building work on this project has been designed to conform to the 2019 California Building Code (2018 IBC).

REINFORCED CONCRETE: (Ultimate Strength Design) :
$f'c$ = 3,600 psi
f_y = 60,000 psi

FOUNDATION:
Soils report dated :XXX XX, 20XX
Allowable Soil Pressure (DL + LL) : = 1,500 psf
For Soil Classification, see Log of Test Boring Sheets.

MIDDLE MILE BROADBAND NETWORK
NETWORK HUB SHELTER 12X20 FOUNDATION PLAN

MMBDN - 21

TAEMWW Imperial - CCSC Rev. 12/20

ORIGINAL DRAWING IS 30 INCHES WIDE
FOR REDUCED PLANS 0 1 2 3

UNIT: 0000 CONTRACT No.: 00-000004
PROJECT NUMBER & PHASE: 00000000001

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)	VERSION	SHEET	OF
09-20-22 09-26-22 09-29-22	V1	21	22

29-SEP-2022 13:03

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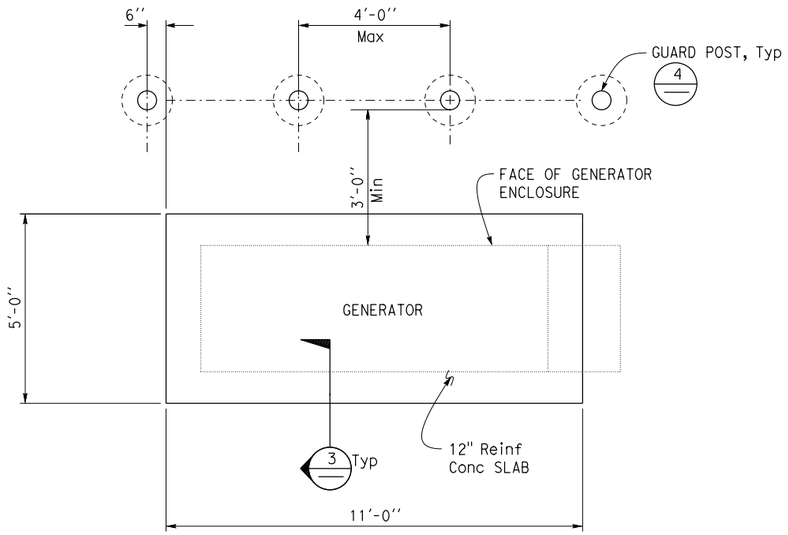
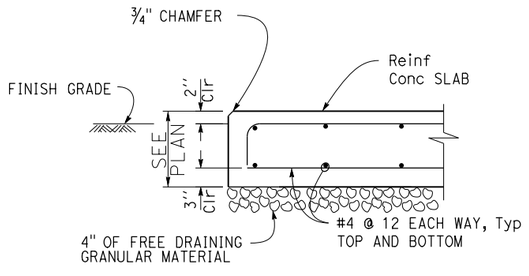
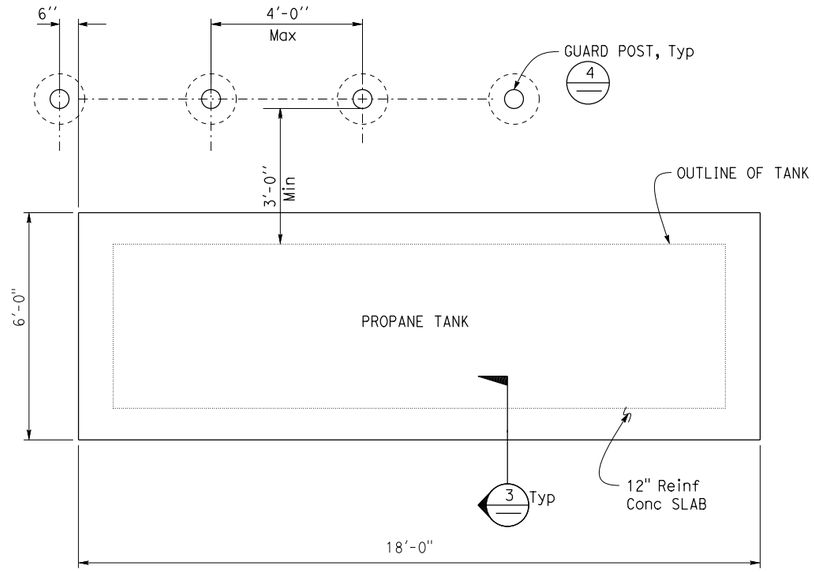


Notes:
1. Anchor generator to slab with mechanical expansion anchors. Quantity of mechanical expansion anchors must not be less than as recommended by the generator manufacturer and not less than 10 anchors minimum. See mechanical expansion anchor requirements.
2. For location and orientation of slab see site plan.
3. For grounding details coordinate with manufacturer and others.
4. Provide guardposts for generator vehicle impact protection. See Site plan for location and quantities.
5. Conduit stub up locations as required per generator manufacturer.
6. Propane fuel line stub up locoations as needed and per generator manufactuer.

1 GENERATOR SLAB PLAN
1/2" = 1'-0"

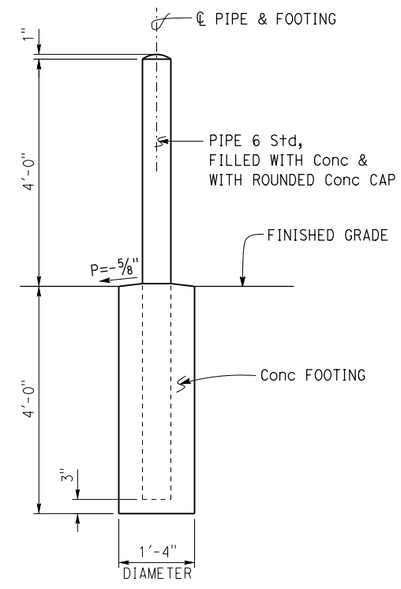


3 SLAB SECTION
1" = 1'-0"



Notes:
1. Anchor tank to slab with either cast in place anchor bolts or mechanical expansion anchors. Quantity and size of anchors must be as recommended by the tank manufacturer.
2. For location and orientation of slab see site plan.
3. Provide guardposts for propane tank vehicle impact protection. See Site plan for lcoation and quantities.
4. Propane fuel line stub up location per tank manufacturer.
5. Conduit for vaporizer (cold locations) as required per tank manufacturer.

2 PROPANE TANK SLAB PLAN
1/2" = 1'-0"



4 PIPE GUARD POST DETAIL
3/4" = 1'-0"

MIDDLE MILE BROADBAND NETWORK GENERATOR AND PROPANE TANK FOUNDATION PLAN

MMBND - 22

TAEMWW Imperial - CCSC Rev. 12/20

ORIGINAL DRAWING IS 36" X 24" | 0 | 1 | 2 | 3
FOR REDUCED PLANS

UNIT: 0000 CONTRACT No.: 00-000004
PROJECT NUMBER & PHASE: 00000000001

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY)							VERSION	SHEET	OF
09-20-22	09-26-22	09-29-22					V1	22	22

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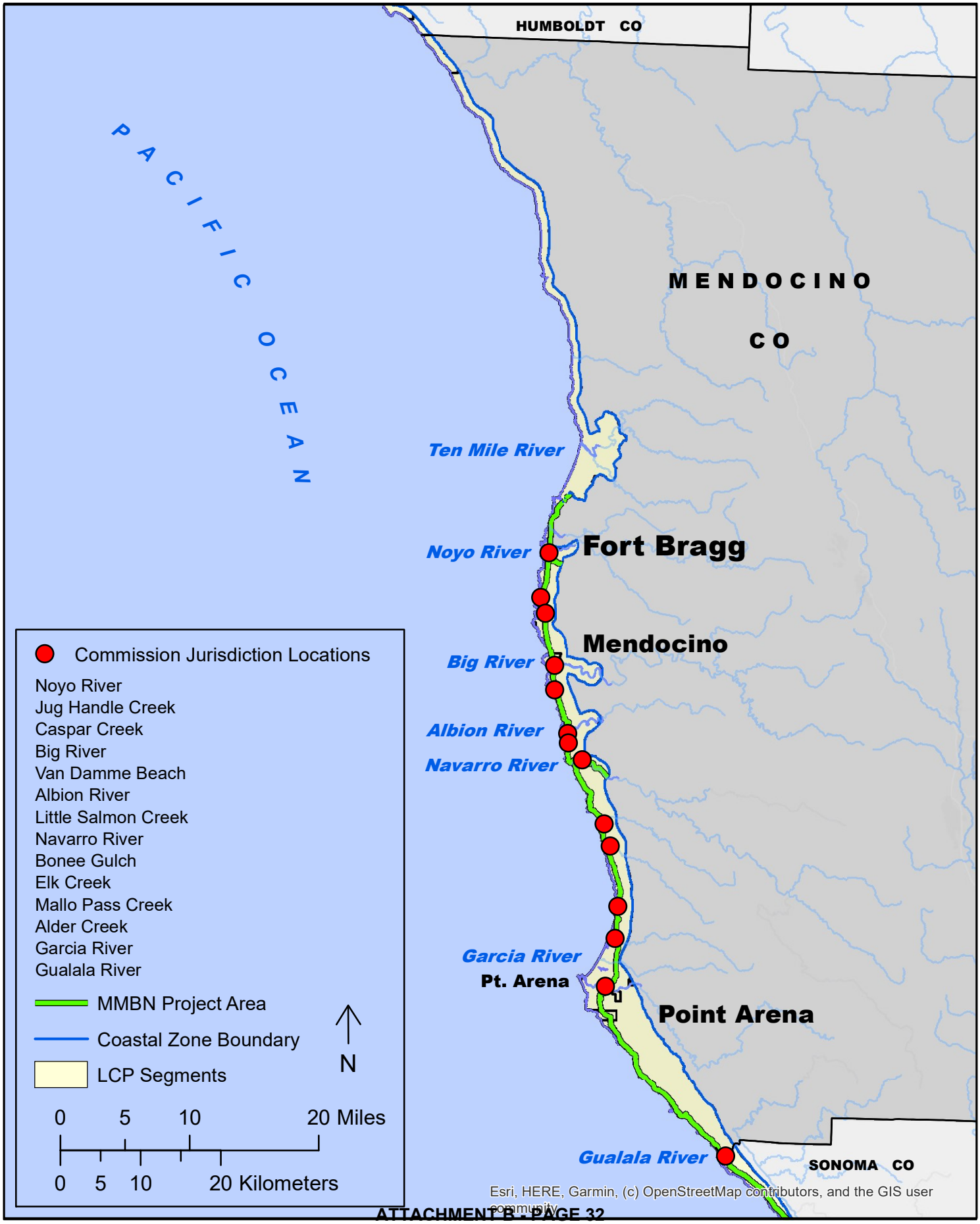
Caltrans Middle-Mile Broadband Network (MMBN)

MENDOCINO COUNTY



MIDDLE-MILE BROADBAND NETWORK COASTAL ZONE GUIDELINES FOR PROGRAMMATIC PERMITTING

California Department of Transportation

December 2022

TARGET AUDIENCE

This guidance is to support District Project Development Teams (PDTs) in complying with the California Coastal Act (Coastal Act), which mandates protection of coastal resources in California's coastal zone. Design and construction of the Middle-Mile Broadband Network (MMBN) should consider opportunities to avoid and minimize coastal resource and public access impacts associated with project components as described in this guidance including the fiber optic conduit path, installation methods, vaults, network hub shelters, and fiber optic markers. Where necessary, mitigation for coastal resource impacts may be required.

District Project Environmental Team staff are available to support PDTs through the assessment of environmental impacts of feasible design options and associated best management practices to avoid and minimize coastal resource impacts—ultimately supporting an efficient and programmatic permitting process for MMBN projects. A key initial ingredient for streamlining permits will be to bundle together each District's project segments that require Coastal Development Permits (CDPs) and work with the California Coastal Commission's and local government's staff to submit a consolidated permit application for processing.

This document covers suggestions for planning, siting, designing, and constructing the MMBN in ways to conform to Coastal Act policies. It is anticipated that there will be a clear reflection of the selected MMBN project design, along with any necessary permit conditions, within standard and non-standard special provision contract specifications for MMBN projects in the coastal zone.

INTRODUCTION

Environmental considerations for the Coastal Zone are provided in this document to avoid and minimize impacts to environmental resources protected by the Coastal Act ("coastal resources") and support a more streamlined coastal development permitting process for MMBN projects. Coastal resources include environmentally sensitive habitat areas (ESHAs); the marine

environment; coastal waters including wetlands, streams, estuaries, lakes, and the ocean; cultural resources; scenic and visual resources; and prime agricultural lands. The Coastal Act generally requires new development, which includes the scope of work of the MMBN project, to avoid or minimize impacts to coastal resources. The Coastal Act also requires new development to protect and enhance public coastal access and minimize risks to life and property in areas with environmental hazards such as fire zones, flood zones, geologic hazards, and areas subject to sea level rise. Relevant policies of the Coastal Act are provided in Appendix A at the end of this document.

In general, the coastal development permitting process can be streamlined by avoiding coastal resources or by ensuring that the development activities have no potential for any adverse effect, either individually or cumulatively, on coastal resources. Where it is not possible to fully avoid areas with coastal resources, or impacts to such resources, implementation of sensitive design options and best management practices (BMPs) as discussed below can help minimize impacts and support findings of consistency of MMBN projects with the Coastal Act. Mitigation may be required for any unavoidable temporary or permanent coastal resource impacts. Early and frequent coordination with District Project Environmental Teams and California Coastal Commission (Coastal Commission) staff is strongly recommended to identify opportunities for coastal resource protection and coastal development permit streamlining.

This document focuses on environmental impacts to coastal zone resources resulting from feasible design options and BMP options for MMBN project segments within the Coastal Zone for the purposes of streamlining the coastal development permitting process. It aims to facilitate the siting, design, and construction of MMBN projects to be consistent with Coastal Act policy requirements. Separately, but similarly, this guidance is also consistent with SB 156 requirements for CEQA exemptions as follows:

1. The project is constructed along, or within 30-feet of, the right-of-way of any public road or highway.
2. The project is either deployed underground where the surface area is restored to a condition existing before the project or placed aerially along an existing utility pole right-of-way.
3. The project incorporates, as a condition of project approval, measures developed to address potential environmental impacts.
4. The project shall be required to include monitors during construction activities and measures to avoid or address impacts to cultural and biological resources.

FIBER OPTIC CONDUIT PATH

For the fiber optic conduit path, the preferred siting from a coastal resource standpoint will be dependent on the location, the presence of coastal resources or coastal hazards, and the potential for impacts to those resources (including the potential need for mitigation). Determining these factors will heavily rely on discussions between District Project Environmental Teams, Coastal Commission staff, and other resource agencies as necessary. In general, placing conduit within the existing pavement footprint is most likely to avoid coastal resource impacts as construction would be occurring in a previously disturbed area and may reduce permitting requirements. Placing conduit as close to the edge of pavement as possible and/or in areas devoid of coastal resources as characterized in the March 25, 2022, Caltrans "Accommodation of Wired Broadband Facilities Within Access Controlled State Highway Right of Way" Memorandum also has the potential to avoid or reduce coastal resource impacts, as well as permitting complexities.

FIBER OPTIC CONDUIT INSTALLATION METHOD

Of the fiber optic conduit installation methods discussed in the MMBN Design Guidelines, the preferred option(s) from a coastal resource standpoint will depend on location, presence of coastal resources and environmental hazards, and the potential for coastal resource impacts. In general, in-pavement micro-trenching and horizontal direction drilling (also known as boring) have reduced environmental impacts in past broadband projects as compared to the other underground installation methods (e.g., plowing and trenching) due to their reduced disturbance to unpaved surfaces that may contain coastal resources. The following discussion addresses the potential impacts that the various installation methods can have on coastal resources, and best management practices (BMPs) for avoiding such impacts.

General BMPs that should be employed for programmatic permitting regardless of the installation method:

BIOLOGICAL AND CULTURAL BMPS:

1. As a general practice, ensure that biological and cultural resource awareness training with construction crews occurs prior to commencement of construction in or near such resource areas and that such training provides construction crews with relevant context on the requirements of the Coastal Act and any permit conditions of approval.
2. Prior to construction, as appropriate along focus segments, complete biological "clearance" surveys for sensitive species of nesting birds, amphibians, other wildlife, and rare plants as well as their habitat areas and flag off the boundaries of any identified nesting or breeding area, wetland, and any other type of ESHA with temporary construction

fencing, flags, or similar means. Exact installation locations or methods may need to be adjusted to avoid these areas accordingly.

3. Prior to construction, as appropriate along focus segments, complete cultural "clearance" surveys for sensitive archaeological and tribal resources and flag off the boundaries of any identified resource areas with temporary construction fencing, flags, or similar means. Exact timing for clearance surveys may need to be adjusted to ensure they occur during the appropriate time for plant, animal, or bird identification, such as during the blooming period of various rare plant species. Exact installation locations or methods may need to be adjusted to avoid any identified sensitive areas accordingly.
4. Ensure that tribal consultations are timely and coordinated with Coastal Commission staff. Absent a process specific to MMBN, refer to the November 2022 *Coastal Commission Memo: Tribal Consultation for Caltrans Projects* for provisions, and that results of those consultations inform appropriate BMPs for constructing in or near areas of known or potential cultural resources.
5. Avoid ground-disturbing activities in areas that contain known cultural resources to the extent feasible. Cultural monitoring should occur in areas of known or potential cultural resources if avoidance is not feasible. If cultural resources will be impacted, additional treatment measures such as data recovery may be required.
6. Per SB 156 Statutory Exemption requirements, projects must include monitors during construction. Refer to the Standard Specifications, Section 14, for contract specifications associated with Environmental Stewardship and monitoring to ensure contractors meet permit requirements and other environmental commitments. Examples of Standard Specifications for inclusion within Section 14 include, but are not limited to, section 14-2.03A, "Archaeological Resources General," section 14-2.03B "Archaeological Monitoring Area," section 14-6.03D, "Contractor-Supplied Biologist," section 14-6.03d(2), "Natural Resources Protection Plan," and bid items "Contractor supplied biologist" (Item code 146001) and "Natural Resources Protection Plan (Item code 014424). On-site monitoring can significantly reduce the potential for impacts to coastal resources and associated mitigation requirements, as well as project delays, and is strongly recommended for all project segments where coastal resources may be present.
7. When required per the contract specifications, clean construction equipment prior to entering the work site to minimize the potential for the transport of non-native vegetation seeds and plant material.
8. Avoid impacts to tree roots by working around driplines of trees. Consult an International Society of Arboriculture (ISA) Certified Arborist for tree and root pruning.

9. If tree removal is unavoidable, contact the Caltrans District Landscape Architect for approval.

HAZARD AVOIDANCE BMPS:

1. Avoid areas that are highly vulnerable to flood hazards, coastal erosion, and sea level rise. Sea level rise is expected to cause increasingly frequent flood events, accelerated coastal erosion rates, and rising groundwater levels, which may affect operations and maintenance needs. The MMBN may need to be incorporated into future sea level rise adaptation projects for the state highway system and cannot be expected to rely on existing or future shoreline protective devices.
2. Avoid installing above-ground components in high fire hazard zones and below-ground components in areas with high liquefaction potential and seismic activity to the extent feasible.

ACCESS AND CIRCULATION BMPS:

1. Limit the area of temporary impacts (e.g., staging and storage) to areas authorized by the Engineer. Consult with Coastal Commission staff on locations of concern and how temporary and permanent impacts are defined and treated.
2. Implement a public access and traffic safety plan to ensure safe and continuous public access and traffic circulation through or detoured around active construction segments.

WATER QUALITY BMPS:

1. Avoid construction during or immediately following heavy rain events to prevent runoff pollution.
2. Implement erosion, runoff, and sediment control BMPs for coastal water quality protection. Erosion control netting should be loose-weave and made of natural fibers to avoid potential for wildlife entanglement and plastic pollution.
3. All ground disturbance that occurs outside of paved areas should be appropriately stabilized and revegetated following construction utilizing only regionally appropriate or locally grown or collected native plant seeds, excluding any species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or the State of California.
4. Ensure proper containment and disposal of any construction-related debris or hazardous materials.
5. Establish a plan for spill prevention and response measures.
6. For consistency with Stormwater Permit compliance, refer to Appendix G of the MMBN Design Guidelines.

BAROTRAUMA EFFECTS ON AQUATIC SPECIES

Depending on site characteristics and proximity to water sources, the potential of any drilling or other construction activities to create barotrauma impacts on aquatic species should be assessed and a plan created for avoiding or minimizing those effects.

MITIGATION OF UNAVOIDABLE IMPACTS TO COASTAL RESOURCES

Mitigation for any temporary or permanent impacts to coastal resources may be necessary. Impacts to sensitive habitat are temporary only if the habitat will recover to its pre-impact condition and function within one year of disturbance. If recovery will take more than one year, the impacts are permanent. Depending on the circumstances, both temporary and permanent impacts may require mitigation. Following impact avoidance and minimization investigations, timely consultation between District Project Environmental and Landscape Architecture Teams and Coastal Commission staff should occur to determine whether, and at what ratios, mitigation may be necessary. Need for mitigation is determined by the type of resource being impacted, the size of the area being impacted, and the requirements of the Coastal Act or certified Local Coastal Program. Programmatic approaches to such mitigation may be explored.

IN-PAVEMENT MICRO-TRENCHING:

There are certain circumstances, including areas where the right of way contains highly sensitive resources or difficult geology or where the available right of way is too narrow to accommodate MMBN components, that in-pavement micro-trenching may be preferred. Consideration also should be given to the fact that in-pavement micro-trenching is the most likely installation method to avoid impacts and thereby simplify or avoid permit requirements. Within the coastal zone, this might include qualifying for a coastal development permit exemption or waiver when there are no sensitive coastal resources in close proximity, nor is there any potential to individually or cumulatively adversely affect such resources. Implementation of the applicable BMPs listed above is essential for avoiding individual or cumulative adverse impacts to coastal resources and obtaining a programmatic permit, waiver, or exemption.

HORIZONTAL DIRECTIONAL DRILLING:

Horizontal directional drilling (HDD) is another environmentally-preferable option as this installation method limits surface disturbance to areas of bore entry and exit pits and can allow for boring under rather than trenching through wetlands, streams, trees, and other ESHAs, as well as existing utilities and irrigation facilities. Coastal resource concerns associated with HDD primarily include the potential for discharge of excavated materials, drilling muds, fluids and other materials from construction activities; the potential for hydraulic fracturing (frac-out) to

impact coastal water quality or ESHAs; noise and vibration impacts to sensitive wildlife species that may occur in the project vicinity; vegetation impacts at bore entry and exit pits; trampling of sensitive wildlife or plant species during equipment mobilization; impacts to cultural resources during ground-disturbing activities outside of paved areas; and risk exposure to hazardous materials or environmentally hazardous areas.

BMPs to avoid or minimize these impacts include:

1. having a contingency plan or spill prevention plan in place to ensure swift and effective responses to any frac-outs or other fuel spills, including providing spill and frac-out equipment with each bore rig at all times during active drilling (refer to Appendix G: Stormwater Compliance in the MMBN Design Guidelines for consistency with Stormwater Permit Compliance)
2. implementing a soil and waste excavation and management plan to ensure proper drilling, stockpiling, and disposal procedures are followed throughout installation
3. identifying and avoiding drilling in any area with hazardous materials or high liquefaction potential
4. having a qualified biological and cultural monitor present throughout construction, as needed based on site conditions and resource proximity. Similar BMPs may be necessary for other installation methods.

TRENCHING:

Trenching involves potential impacts to coastal resources as it involves ground-disturbing activities outside of existing paved areas. Specifically, the trenching procedure and equipment may involve vegetation removal, noise disturbance to nearby wildlife species, ground-disturbing activities in environmentally or culturally sensitive areas, and water quality impacts from sediment runoff. Installation within previously disturbed areas that are devoid of coastal resources and implementation of the general BMPs listed above can help to avoid or minimize these coastal resource impacts. If there is any case where conduit must be installed through an environmentally or culturally sensitive area and alternative installation methods that would minimize impacts cannot be used, mitigation can be expected to be required for any temporary or permanent impacts.

PLOWING:

See trenching.

JACK AND DRILL:

See HDD.

AERIAL INSTALLATION:

The MMBN is planned for underground installation only. Under rare circumstances, with approval from CDT, aerial installation may be considered. Potential impacts from aerial installation include impacts to scenic and visual resources (e.g., obstruction of a protected view, location within a designed scenic area); exposure to environmental hazards (e.g., risks associated with location in a high fire hazard severity zone); and impacts to any vegetation, water resources, or cultural resources that must be removed or disturbed during construction.

BMPs for avoiding these potential impacts include using underground installation methods where feasible; or, where underground installation is not feasible or would cause greater environmental impacts, aerial installation should utilize existing utility infrastructure as available. Co-locating broadband cable with existing utilities on existing poles to the greatest extent feasible would be the first preference. Where new utility poles would be required, the following BMPs would help to avoid or minimize coastal resource impacts:

1. Limit the number of new poles and pole heights such that obstruction of any protected views and intrusion into any designated scenic areas is minimized to the extent feasible. Providing visual impact analyses such as project renderings and early coordination with the Coastal Commission will support efforts to minimize visual impacts.
2. Avoid areas that are subject to fire hazards, flood hazards, geologic and seismic hazards, and sea level rise to the extent feasible. If such areas cannot be avoided, provide appropriate design features (e.g., fireproofing, flood-proofing) to minimize risks and support safe, on-going operations of the MMBN.
3. Avoid vegetation removal or surface water disturbance to the extent feasible. Where this is not feasible, ensure that a qualified biological monitor is present to identify and protect any sensitive wildlife or plant species, such as through pre-construction biological surveys.
4. Avoid and minimize surface disturbance activities where any cultural resources may be present.

STRUCTURE ATTACHMENT:

Structure attachment (i.e., installation on bridges) can avoid coastal resource impacts typically associated with ground-disturbing activities but has the potential to disturb sensitive wildlife such as nesting birds and roosting bats that may use the structure or the surrounding area for habitat. BMPs to avoid or minimize these impacts include avoiding installation during bird nesting and bat roosting seasons, conducting pre-construction surveys to identify any active nests or roosts, and providing a qualified biological monitor to assist in halting or adjusting construction activities to avoid wildlife impacts as necessary.

FIBER OPTIC MARKERS

Fiber optic markers have the potential for visual impacts as an above-ground component of the MMBN. To reduce visual impacts from the fiber optic markers, the Disk Marker is the preferred option. Opportunities to install fiber optic markers on pre-existing signs, guard rails, or other transportation system infrastructure should be utilized to further reduce the potential for visual impacts.

VAULTS

Placement of vaults must consider avoidance of protected coastal resources and environmental hazard areas. Specifically, consideration of vault spacing flexibility (i.e., less than the standard requirement of every 2,500 feet) is necessary for vaults in the following locations:

1. Inundated or Saturated Soils
2. Waters of the U.S. or State
3. Wetlands
4. Rivers / streams
5. Environmentally sensitive habitat areas
6. Presence of Cultural or Tribal Resources
7. Designated scenic areas
8. Protected visual resources
9. Prime agricultural soils
10. Areas with high fire, flood, geologic, or other environmental hazards, will be exacerbated by sea level rise

BMPs for avoiding or minimizing coastal resource impacts that may be caused by vaults include:

1. To the extent feasible, install vaults underground or flush with the ground within previously disturbed right-of-way areas. Where vaults must be above-ground, co-locate vaults with existing state facilities or infrastructure.
2. Avoid siting vaults within cultural resource areas, environmental hazard areas, and areas with prime agricultural soils. Siting vaults in areas subject to current or future flood and erosion hazards and sea level rise inundation may cause future operations and maintenance issues.
3. If hazard areas cannot be avoided, provide appropriate design features (e.g., fireproofing, flood-proofing) to minimize hazards risks and support safe, on-going operations of the MMBN.
4. Provide qualified biological and cultural monitors during ground disturbing activities.
5. Consider aesthetic treatments such as colorization or screening to improve compatibility with the surrounding environment and community character. Consult with the Caltrans District Landscape Architect for recommendations on aesthetic treatments to address visual impacts.

For vaults proposed in or near wetlands, consult with the District Project Environmental Teams and Coastal Commission staff to determine if the vault is an allowed use within wetlands pursuant to the Coastal Act, options for relocating the vault with an appropriate buffer distance from wetlands (typically 100 feet), and whether mitigation may be necessary for any unavoidable impacts.

The Coastal Act requires the protection of ESHAs from any significant disruption of habitat values and only allows for uses that are dependent on ESHA resources; broadband is not such a use. Every effort should be made to site development such as vaults out of ESHAs because of these prohibitions, or more complicated permitting considerations and procedures will be triggered.

VAULTS MARKERS

Vault markers have the potential for visual impacts as an above-ground component of the MMBN network. To reduce visual impacts from the Vault Markers, the Disk Marker is the preferred option. Opportunities to install vault markers on pre-existing signs, guard rails, or other transportation system infrastructure should be utilized to further reduce the potential for visual impacts.

NETWORK HUB SHELTERS

Placement of network hub shelters must consider avoidance of protected coastal resources and environmental hazard areas. Advance consultations between Caltrans and Coastal Commission staff regarding the siting of network hub shelters in the coastal zone are strongly recommended. Specifically, consideration of network hub shelter spacing flexibility (i.e., within 5 miles of the proposed location) is necessary for network hub shelters that are proposed within or in close proximity to the following locations:

1. Inundated or Saturated Soils
2. Waters of the U.S. or State
3. Wetlands
4. Rivers / streams
5. Environmentally sensitive habitat areas
6. Presence of Cultural or Tribal Resources
7. Designated scenic areas
8. Designated scenic highways
9. Protected visual resources
10. Viewsheds from public beaches or trails
11. Prime agricultural soils
12. Areas with high fire, flood, geologic, or other environmental hazards, including those that will be exacerbated by sea level rise

BMPs for avoiding or minimizing coastal resource impacts that may be caused by network hub shelters include:

1. To the extent feasible, site network hub shelters within previously disturbed right-of-way areas and co-locate network hub shelters with existing state facilities or infrastructure, particularly those areas where electrical service is already available; this can both reduce environmental impacts and potential construction delays.
2. Site network hub shelters a minimum of 100 feet from any ESHA, wetland, and stream/riparian corridor.
3. Avoid siting network hub shelters within cultural resource areas, environmental hazard areas, and areas with prime agricultural soils. Siting network hub shelters in areas subject to current or future flood hazards, coastal erosion, and sea level rise inundation may cause future operations and maintenance issues. Network hub shelters must be sited to avoid the need for shoreline protective devices (e.g., seawalls, revetments) over the full design life of the infrastructure.
4. If hazard areas cannot be avoided, provide appropriate design features (e.g., fireproofing, flood-proofing) to minimize hazards risks and support safe, on-going operations of the MMBN.
5. Provide qualified biological and cultural monitors during ground disturbing activities.
6. Every effort should be made to place network hub shelters outside of ESHAs, provide adequate buffers around those areas, and avoid any negative impacts to coastal public access. Consult with the Caltrans District Landscape Architect for recommendations on adequate buffers to address visual impacts.

Aesthetic treatments such as architectural styling, colorization and other design options for the fence, shelter structure, and any other above-ground infrastructure to match the surrounding community character should be considered. Providing visual impact analyses such as network hub shelter renderings and early coordination with Coastal Commission staff will support efforts to minimize visual impacts and speed the process for appropriately siting the facilities. Consult with the Caltrans District Landscape Architect to perform a visual impact analysis.

APPENDIX A: RELEVANT COASTAL ACT POLICIES

Relevant policies of the Coastal Act include, but are not limited to, the below. For complete and current Coastal Resources Planning and Management Policies, reference Chapter 3 of the Coastal Act.

> **30210.** In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously

posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

30211. Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

30230. Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

30231. The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

30232. Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

30240. (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.
(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

30244. Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

30251. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

30253. New development shall do all of the following:

(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

(c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.

(d) Minimize energy consumption and vehicle miles traveled.

(e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.

30270. The commission shall take into account the effects of sea level rise in coastal resources planning and management policies and activities in order to identify, assess, and, to the extent feasible, avoid and mitigate the adverse effects of sea level rise.

RESOLUTION NO. 2023-

RESOLUTION OF THE MENDOCINO COUNTY BOARD OF SUPERVISORS AUTHORIZING THE PROCESSING OF A CONSOLIDATED COASTAL DEVELOPMENT PERMIT BY THE CALIFORNIA COASTAL COMMISSION FOR CALIFORNIA DEPARTMENT OF TRANSPORTATION TO INSTALL BROADBAND INFRASTRUCTURE AT VARIOUS LOCATIONS WITHIN THEIR RIGHT-OF-WAY THROUGHOUT MENDOCINO COUNTY

WHEREAS, the Coastal Act was amended by Senate Bill 1843 effective January 1, 2007, which allows for a consolidated permitting process for projects for which the Coastal Development Permit authority is shared by a local government and the California Coastal Commission; and

WHEREAS, SB 1843 requires that the applicant, the local government, and the California Coastal Commission agree to the consolidation; and

WHEREAS, the proposed broadband infrastructure project consisting of the installation of fiber optic conduit and cable, network hubs, vaults, markers, and maintenance vehicle pullouts in various locations in Mendocino County is under the coastal development permit authority of both Mendocino County and the California Coastal Commission and would otherwise require a Coastal Development Permit from both Mendocino County and the California Coastal Commission for the improvements located within each jurisdiction; and

WHEREAS, pursuant to Public Resources Code Section 30601.3, added by SB 1843, consolidation may only proceed where public participation is not substantially impaired by the consolidation; and

WHEREAS, public participation will not be substantially impaired as the California Coastal Commission will hold a public hearing, which may be attended by all interested parties (by either being present during a properly noticed California Coastal Commission meeting or by timely submitting comments in advance of a meeting) and the consolidation of the permit process will allow for this project, which involves the installation of fiber optic conduit and cable, network hubs, vaults, markers, and maintenance vehicle pullouts in various locations in Mendocino County, to be evaluated in its entirety.

NOW, THEREFORE, BE IT RESOLVED that the Mendocino County Board of Supervisors authorizes the California Coastal Commission to accept and process a consolidated Coastal Development Permit application for the California Department of Transportation for the installation of fiber optic conduit and cable, network hubs, vaults, markers, and maintenance vehicle pullouts in various locations in Mendocino County finding that pursuant to Public Resources Code Section 30601.3 consolidation for this project is appropriate as public participation will not be substantially impaired by the consolidation.

The foregoing Resolution introduced by Supervisor , seconded by Supervisor , and carried this day of , 2023, by the following vote:

AYES:
NOES:
ABSENT:

WHEREUPON, the Chair declared said Resolution adopted and SO ORDERED.

ATTEST: DARCIE ANTLE
Clerk of the Board

_____
Deputy

APPROVED AS TO FORM:
CHRISTIAN M. CURTIS
County Counsel

_____

_____
GLENN MCGOURTY, Chair
Mendocino County Board of Supervisors

I hereby certify that according to the provisions of Government Code Section 25103, delivery of this document has been made.

BY: DARCIE ANTLE
Clerk of the Board

_____
Deputy