COUNTY OF SAN JOAQUIN

DEPARTMENT OF PUBLIC WORKS
P.0. BOX 1810-1810 E. HAZELTON AVENUE
STOCKTON, CALIFORNIA 95201
(209) 468-3000
FAX # (209) 468-9324

Permit No: **PS-1901179**
Date Issued: 04/18/2019
Start Date: 05/01/2019
Exp. Date: 01/01/2020
Project No: PWP7110005
Quad:

ENCROACHMENT PERMIT

To: CVIN
7447 N PALM BLUFFS AVE 105
FRESNO CA 93711

Encroachment Type:

Bore (up to 12 inch Dia)	Trench		

Location:
PRESCOTT RD N/O LUISE AVE

In compliance with your request of **04/18/2019** , permission is hereby granted to do work in County right-of-way as shown on attached application and subject to all the terms, conditions and restrictions written below or printed as general or special provisions on any part of this form. See reverse side and attached sheet, if any.

Trench excavations for service connections will not be permitted within ten feet (10') of pavement centerline unless otherwise approved by the Director. Surface of trench patches shall match in kind and be smooth and even with that of abutting surface. Special attention shall be given to depth of utilities through roadside area in anticipation of future drainage facilities, road profile and/or frontage development. All underground utility facilities are to be established and accurately dimensioned on sketches from surveyed centerline of road right of way, or from right of way (border) lines.

Permittee shall call the Department of Public Works, Field Engineering Division (Permit Inspections) at (209)953-7421 at least forty-eight hours prior to beginning any work within the County right of way. All work performed under this permit shall conform to the rules and regulations pertaining to safety established by the California Division of Industrial Safety and Cal-OSHA.

The jobsite shall be kept in a safe condition at all times by the daily removal of any excess dirt or debris which might be a hazard to either pedestrian or automobile traffic. All necessary traffic convenience and warning devices and personnel shall be provided, placed and maintained by and at the sole expense of the Permittee in accordance with the latest edition of the CALTRANS Manual of Traffic Control.

After completion of the work permitted herein, all debris, lumber, barricades, or any excess material shall be removed and the jobsite left in a neat workmanlike manner. Immediately following completion of construction permitted herein, Permittee shall fill out and mail notice of completion (see attached post card) provided by Grantor.

Special Comments:

Traffic Control Per MUTCD

FORMS:			
	SS/WW, R-29		

Est. Permit Fee: $15,325.09

KRIS BALAJI, Director
Department of Public Works

By: _____
Permit Section

WHITE	-Permittee
GOLDENROD	-PWD Central File
YELLOW	-Field Inspection
PINK	-Permit Section

ENCROACHMENT PERMIT GENERAL PROVISIONS

13-1

1. This permit is issued under and subject to all laws and ordinances of agencies governing the encroachment herein permitted. See the following references:
   STREETS AND HIGHWAYS CODE
   1. Division 1, Chapter 3
   2. Division 2, Chapter 2, Section 942
   3. Division 2, Chapter 4, Section 1126
   4. Division 2, Chapter 5.5 and Chapter 6

   SAN JOAQUIN COUNTY ORDINANCES NUMBERED: 324, 441, 648, 662, 672, 695, 700, 860, 892, 3359, and 3675.

2. It is understood and agreed by the Permittee that the performance of any work under this permit shall constitute an acceptance of all the provisions contained herein and failure on the Permittee's part to comply with any provision will be cause for revocation of this permit. Except as otherwise provided for public agencies and franchise holders, this permit is revocable on five days notice.

3. All work shall be done subject to the supervision of and the satisfaction of the grantor. The Permittee shall at all times during the progress of the work keep the County Highway in as neat and clean condition as is possible and upon completion of the work authorized herein, shall leave the County Highway in a thoroughly neat, clean and usable condition.

4. The Permittee also agrees by the acceptance of this permit to properly maintain any encroachment structure placed by the Permittee on any part of the County Highway and to immediately repair any damage to any portion of the highway, which occurs as a result of the maintenance of the said encroachment structure, until such time as the Permittee may be relieved of the responsibility for such maintenance by the County of San Joaquin.

5. The Permittee also agrees by the acceptance of this permit to make, at its own expense, such repairs as may be deemed necessary by the County Department of Public Works.

6. It is further agreed by the Permittee that whenever construction, reconstruction or maintenance work upon the highway is necessary, the installation provided for herein shall, upon request of the County Department of Public Works, be immediately moved or removed by and at the sole expense of the Permittee.

7. No material used for fill or backfill in the construction of the encroachment shall be borrowed or taken from within the County right of way.

8. All work shall be planned and carried out with as little inconvenience as possible to the traveling public. No material shall be stacked within eight feet (8') of the edge of the pavement or traveled way unless otherwise provided herein. Adequate provision shall be made for the protection of the traveling public. Traffic control standards shall be utilized including barricades; approved signs and lights; and flagmen, as required by the particular work in progress.

9. The Permittee, by the acceptance of this permit, shall assume full responsibility for all liability for personal injury or damage to property which may arise out of the work herein permitted or which may arise out of the failure of the part of the Permittee to properly perform the work provided under this permit. In the event any claim of such liability is made against the County of San Joaquin or any department, official or employee thereof, the Permittee shall defend, indemnify, and hold each of them harmless for such claim.

10. All backfill material is to be moistened as necessary and thoroughly compacted with mechanical means. If required by the County Director of Public Works, such backfill shall consist of gravel or crushed rock. The Permittee shall maintain the surface over structures placed hereunder as may be necessary to insure the return of the roadway to a completely stable condition and until relieved of such responsibility by the County Department of Public Works. Wherever a gravel, crushed rock or asphalt surface is removed or damaged in the course of work related to the permitted encroachment, such material shall either be separately stored and replaced in the roadway as nearly as possible in its original state or shall be replaced in kind, and the roadway shall be left in at least as good a condition as it was before the commencement of operations of placing the encroachment structure.

11. Whenever it becomes necessary to secure permission from abutting property owners for the proposed work, such authority must be secured by the Permittee prior to starting work.

12. The current and future safety and convenience of the traveling public shall be given every consideration in the location and methods of construction utilized.

13. The Permittee is responsible for the preservation of survey monuments located within the area of work herein permitted. Prior to the start of construction, survey monuments that potentially may be disturbed shall be located and referenced by a Licensed Land Surveyor, and a Corner Record filed with the County Surveyor. Any Survey Monuments disturbed during the course of construction shall be reestablished by a Licensed Land Surveyor and another Corner Record filed with the County Surveyor. (Land Surveyors' Act Section 8771)

14. Prior to any excavation, the Permittee shall notify USA North (Underground Service Alert of Northern California and Nevada) at 811 or 800-227-2600 forty-eight (48) hours in advance.

APPLICATION FOR ENCROACHMENT PERMIT

PLEASE PRINT:

Date 04/16/2019

To: San Joaquin County
Department of Public Works

CVIN, LLC
(Applicant Name)

7447 N. PALM BLUFFS AVE. Ste. 105
(Mailing Address)

FRESNO, CA 93711
(City, State, Zip Code)

559-554-9139
(Area Code - Telephone Number)

Rbebb@cvin.com
(Email Address)

OFFICE USE ONLY

JOB # 110005 REF #
APN CR #
EXP. DATE
VALID TO
STREET
AREA QUAD
TYPE
FORMS
NOTES

DRIVEWAYS:
*
*
*

Sketch (Detailed plans may be submitted)

The undersigned hereby applies for permission to excavate, construct and/or otherwise encroach on County Highway Right-of-Way on the WEST side of S. PRESCOTT RD. approximately _____ feet/mile _____ of 1.25"Ø CONDUIT & 4-WAY FUTUREPATH, _____, by performing the following work (description of work): INSTALLING 8,507 ft. OF 1.25" & 4-WAY FP VIA HDD BORE METHOD, AND 8,193 ft. VIA THE TRENCH METHOD MAINTAINING A MINIMUM OF 48" COVER. INSTALL (10) NEW 24x36x30 HANDHOLES AS FAR AWAY FROM THE EDGE OF PAVEMENT AS POSSIBLE

Work will commence on or after 05/01/2019 for approximately 240 days.

I, the undersigned, certify that I am the owner of the respective property, or am qualified to represent the owner and agree to do the work described above in accordance with the rules and regulations of San Joaquin County and subject to inspection and approval.

Signature of Applicant - Title

04/16/19
Date

Acknowledgement of Monument Responsibility
"Pre-Construction"

Monument Preservation prior to construction activity

I, Andrew Hammond, a duly Licensed Land Surveyor or a Professional Engineer authorized
(Please Print)
to perform Land Surveying in the State of California, Registration No. 9446, hereby acknowledge and accept all responsibility for the monument preservation as required per Section 8771(a-f) of the Business and Professions Code within the bounds of the construction activity permitted by the following permit:

Permit No. _____.

Construction Site Address: Austin - 5089-VZW (Manteca, CA).

I further acknowledge that I am hereby responsible for the Acknowledgement of Monument Preservation prior to final acceptance of the construction activity.

_____ Seal
Signature

3/7/19
Date

LICENSED LAND SURVEYOR
ANDREW M. HAMMOND
Exp. 6/30/20
PLS 9446
STATE OF CALIFORNIA

3/7/19

CVIN, LLC
SAN JOAQUIN COUNTY PERMIT PLANS
INSTALLATION OF FIBER OPTIC FACILITIES
VERIZON WIRELESS

PROJECT LENGTH: 19,245 ft.	CALTRANS LENGTH: 106 ft.
CITY LENGTH: 2,440 ft.	RAILROAD LENGTH:
COUNTY LENGTH: 16,700 ft.	WATER LENGTH:

CONSTRUCTION TOTALS		MATERIAL TOTALS	
BORE	10,931'	1.25"ø HDPE CONDUIT	19,302'
CASED BORE	106'	1"ø HDPE CONDUIT	---
TRENCH	---	4-WAY FUTURE PATH	19,302'
MICRO TRENCH	---	10/12mm MICRODUCT	---
PLOW	8,193'	4"ø CASING	106'
BRIDGE ATTACHMENT	---	3/4"ø EMT PIPE	---
CUT & TRENCH	---	16 AWG TRACER WIRE	---
ROCKSAW	---	MULE TAPE	---
CONDUIT OVERRIDE	---	BORE PITS	63
AERIAL	---	24x36x30 HANDHOLES	9
AERIAL STRAND	---	BARREL VAULT	1
POLE RISER	---	MARKER POST (EST.)	18

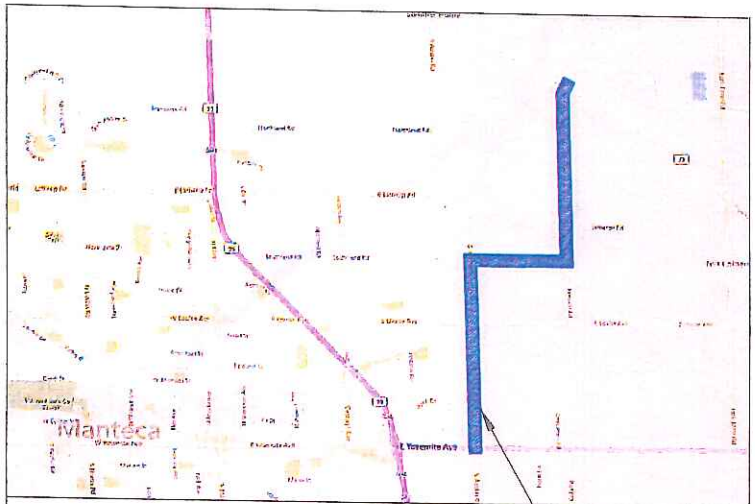
CONTRACTOR NOTICE:

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY FIELD INSPECTION AND A SEARCH OF THE AVAILABLE CITY OR COUNTY RECORDS. SINCE THE ACTUAL LOCATION AND NATURE OF THE UNDERGROUND FACILITIES MAY BE SOMEWHAT DIFFERENT FROM THAT SHOWN, THE CONTRACTOR IS REQUIRED TO VERIFY THE INFORMATION THROUGH UNDERGROUND SERVICE ALERT (USA) OR BY CONTACTING THE UTILITY COMPANIES DIRECTLY, PRIOR TO EXCAVATION.

GENERAL NOTES:

THE FOLLOWING NOTES ARE PROVIDED TO GIVE DIRECTIONS TO THE CONTRACTOR BY THE ENGINEER OF WORK. THE PERMIT AGENCY'S SIGNATURE ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF THESE NOTES AND THAT AGENCY WILL NOT BE RESPONSIBLE FOR THEIR ENFORCEMENT:

1. THE LOCATIONS OF EXISTING UTILITIES, RIGHTS-OF-WAY AND EASEMENTS SHOWN ON THESE PLANS ARE BASED ON AVAILABLE RECORDS AND ARE APPROXIMATE IN NATURE. WHERE CONFLICTS EXIST WITHIN THE RECORDS OR BETWEEN THE RECORDS AND FIELD OBSERVATIONS, THE ENGINEER OF WORK ASSUMES NO RESPONSIBILITY FOR THE CORRECTNESS OF THAT INFORMATION AS DEPICTED.
2. PRIOR TO COMMENCING IMPROVEMENT OPERATIONS, THE CONTRACTOR SHALL VERIFY THE LOCATION, BOTH HORIZONTALLY AND VERTICALLY, OF ALL EXISTING FACILITIES AFFECTED BY THE PROPOSED WORK, WHETHER OR NOT THOSE FACILITIES ARE DEPICTED CORRECTLY ON THESE PLANS.
3. IF EXISTING FACILITIES VARY SIGNIFICANTLY IN LOCATION OR DEPTH FROM THESE PLANS, THE ENGINEER OF WORK SHOULD BE NOTIFIED TO MAKE ANY DESIGN CHANGES REQUIRED.
4. THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR COMPLIANCE WITH THE PROVISIONS OF THE STATE OF CALIFORNIA SAFETY ORDERS.
5. THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER OF WORK HARMLESS.
6. THE BORE LOCATIONS INDICATED ON THE STAKING SHEETS ARE THE ENGINEER'S BEST ESTIMATE OF LOCATION AND LENGTH AS REQUIRED TO MEET JURISDICTIONAL REQUIREMENTS AND/OR TO AVOID SURFACE OR OTHER DAMAGE THAT MAY BE ASSOCIATED WITH TRADITIONAL TRENCHING OR PLOWING METHODS. INSPECTOR & CONTRACTOR SHALL REVIEW ALL FIELD CONDITIONS PRIOR TO CONSTRUCTION AND VERIFY THAT THE INDICATED BORE UNITS ARE ACCURATELY IDENTIFIED, APPROPRIATELY LOCATED AND ACTUALLY REQUIRED (NOTIFY ENGINEER AND /OR OWNER OF ANY DISCREPANCIES). IF A BORE UNIT CAN BE ELIMINATED, WITH THE APPROVAL OF THE PERMITTING AUTHORITY AND WITH AN ASSOCIATED NET COST SAVINGS, THEN THE BORE UNIT SHALL BE ELIMINATED. ALSO, NOTIFY ENGINEER AND /OR OWNER OF ADDITIONAL BORES THAT ARE REQUIRED, BUT ARE NOT INDICATED ON THE STAKING SHEETS.
7. THE HANDHOLE/VAULT LOCATIONS INDICATED ON THE STAKING SHEETS ARE THE ENGINEER'S BEST ESTIMATE OF LOCATION FOR PLACING THE UNIT AS REQUIRED TO MEET CVIN, JURISDICTIONAL AND/OR SAFETY REQUIREMENTS AND TO PROVIDE AN APPROPRIATE LOCATION THAT WILL ALLOW FOR PARKING, EASE OF ACCESS AND ADEQUATE SPACE TO PERFORM INSTALLATION AND MAINTENANCE WORK. IN HIGHWAY LOCATIONS WHERE THE CONDUIT RUNNING LINE IS INDICATED TO BE IN THE ROAD SHOULDER NEAR THE EDGE OF ASPHALT, THE HANDHOLES SHALL BE PLACED AT LEAST 20 FEET AWAY FROM THE FOG LINE (BEYOND THE CLEAR RECOVERY ZONE), IN A SAFE LOCATION AWAY FROM ANY BIOLOGICAL OR CULTURAL AVOIDANCE AREAS. CONDUIT SHALL ENTER AND EXIT THE HANDHOLE USING SEPARATE TRENCHES AT 45-DEGREES TO THE ROADWAY TO MAINTAIN ROUTE DIVERSITY. INSPECTOR & CONTRACTOR SHALL REVIEW ALL FIELD CONDITIONS PRIOR TO CONSTRUCTION AND VERIFY THAT ALL INDICATED UHF UNITS ARE APPROPRIATELY LOCATED. FINAL POSITION OF UHF MAY BE RELOCATED IF A MORE APPROPRIATE POSITION CAN BE IDENTIFIED NEARBY. (NOTIFY ENGINEER AND/OR OWNER OF ANY DISCREPANCIES & ADJUSTMENTS). ALSO, NOTIFY ENGINEER AND/OR OWNER OF ADDITIONAL HANDHOLES THAT MAY BE REQUIRED, BUT ARE NOT INDICATED ON THE STAKING SHEETS.
8. CONTRACTOR SHALL PROVIDE COMPLETE AS-BUILT PLANS, WITH GPS COORDINATES IN NAD-83 FORMAT, WITH SUB-METER ACCURACY (N000.00000000, W000.00000000) FOR ALL CONDUIT SPLICE POINTS, HANDHOLES AND ROAD CROSSING LOCATIONS, PER CVIN SPECIFICATIONS.
9. CONTRACTOR SHALL SUPPLY AND INSTALL (1) 18AWG SOLID COPPER TRACER WIRE (RED INSULATION) WITH 1.25" CONDUIT (IF NOT INCLUDED WITH FUTURE PATH CONDUIT). SPLICE AS REQUIRED WITH GEL-FILLED WIRE NUTS TO ASSURE CONTINUITY.



VICINITY MAP

COUNTY OF SAN JOAQUIN
DEPARTMENT OF PUBLIC WORKS

APPROVED AS "ENCROACHMENT PERMIT PLAN SET"
APPROVED FOR WORK WITHIN COUNTY RIGHT-OF-WAY ONLY

ACCEPTED: _____ DATE

RCE NO.: _____ EXP. DATE: _____

ENCROACHMENT PERMIT NO.: _____ DATE ISSUED: _____ BY: _____

INDEX:

SHEET 1 COVER SHEET & VICINITY MAP
SHEET 2 KEY MAP
SHEET 3 HANDHOLE AND CONDUIT DETAILS
SHEET 4 TYPICAL DETAILS
SHEET 5 TYPICAL TRAFFIC CONTROL PLANS
SHEET 6-12 PERMIT PLANS

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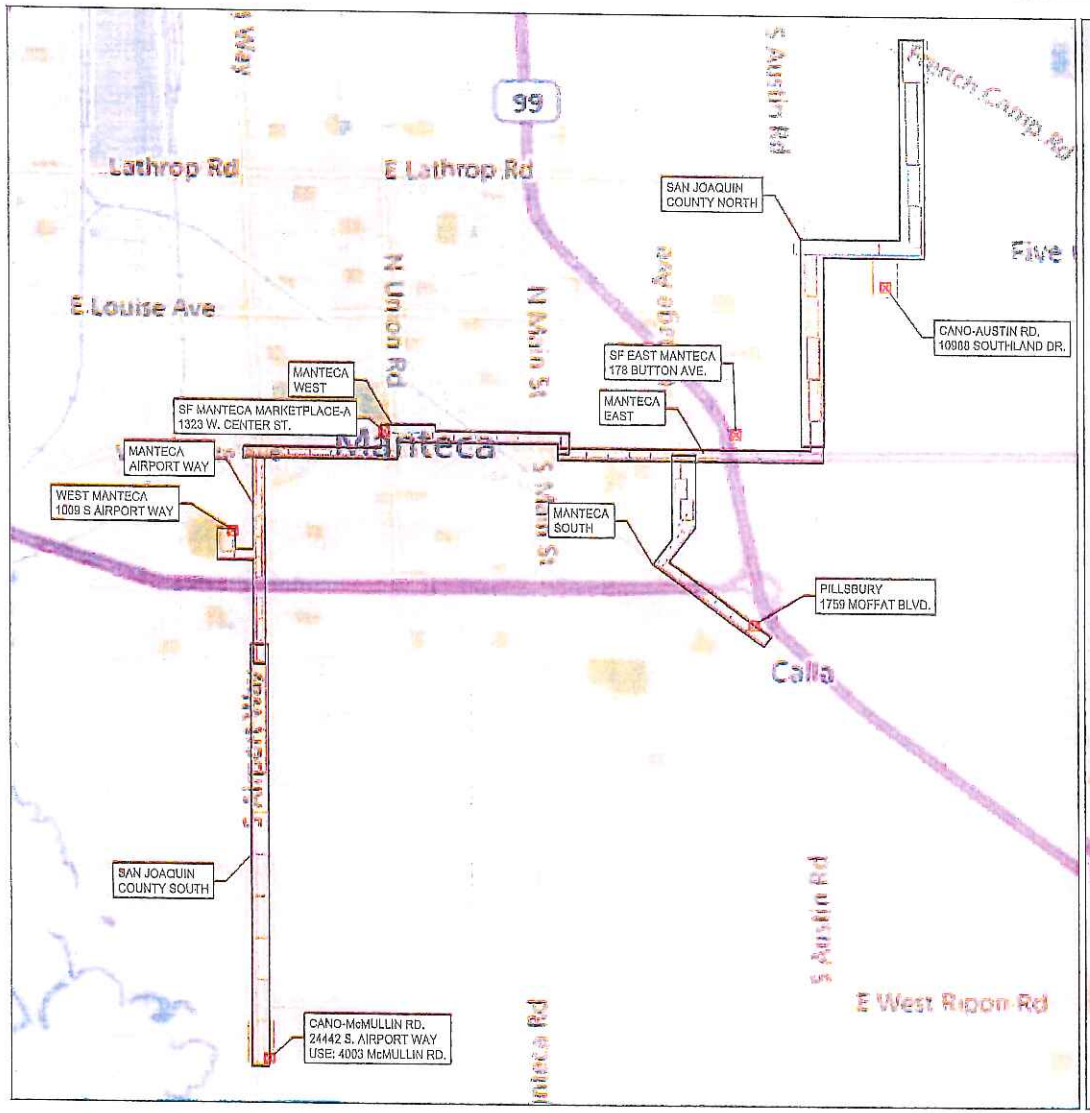
CVIN GENERAL CONSTRUCTION NOTES:

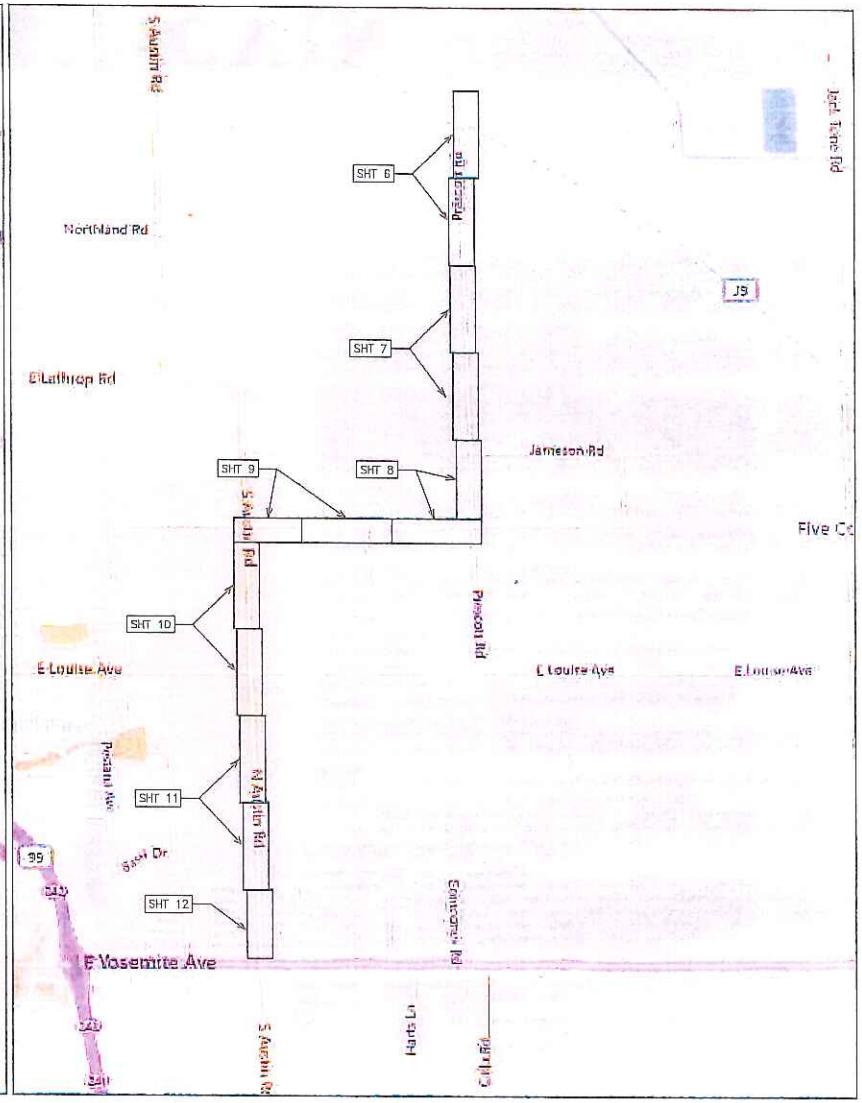
1. ALL CVIN SUPPLIED MATERIAL TO BE PICKED UP BY CONTRACTOR AT CVIN STORAGE YARD AT 1742 W. PINE, FRESNO, CA. 93728 (NO FORKLIFT IN YARD). CONTRACTOR TO RETURN ALL EXTRA OR UNSED MATERIALS TO CVIN YARD UPON COMPLETION OF THE PROJECT.
2. MATERIAL TO BE INSPECTED BY CONTRACTOR AND CVIN REPRESENTATIVE TO ENSURE QUALITY OF MATERIALS.
3. CONTRACTOR TO WALK PROJECT AND CONFIRM TRENCH LOCATIONS, BORE LOCATIONS AND HANDHOLE/MANHOLE LOCATIONS PRIOR TO THE START OF CONSTRUCTION. CONFIRM ANY PROPOSED CHANGES IN WRITING WITH CVIN REPRESENTATIVE.
4. CONTRACTOR TO INSTALL PER CVIN SPECIFICATIONS AND DETAILS ATTACHED.
5. CVIN REPRESENTATIVE TO BE PRESENT TO INSPECT WORK PERFORMED FOR CVIN AT CALTRANS AND RAILROAD CROSSINGS.
6. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR TO CLEAN AND PROOF ALL DUCTS TO ENSURE PROPER INSTALLATION.
7. CONTRACTOR TO PLUG ALL CONDUITS PLACED USING SUPPLIED CONDUIT PLUGS.
8. CONTRACTOR SHALL SUPPLY AND INSTALL (1) 18AWG SOLID COPPER TRACER WIRE (RED INSULATION) WITH 1.25" CONDUIT (IF NOT INCLUDED WITH FUTURE PATH CONDUIT). SPLICE AS REQUIRED WITH GEL-FILLED WIRE NUTS TO ASSURE CONTINUITY.
9. CONTRACTOR SHALL SUPPLY AND INSTALL MULE TAPE IN 1.25"ø HDPE DUCT CONTINUOUS FROM FROM BEGINNING TO END. PROVIDE 30' SLACK AT BEGINNING AND END HANDHOLES.
10. WARNING SIGNS AND DECALS SHALL BE SUPPLIED BY OWNER. CONTRACTOR SHALL NOTIFY OWNER OF ALL MID-PAN CONDUIT SPLICES AS THAT QUANTITY IS NOT ACCOUNTED FOR IN THE BID UNIT QUANTITY SUMMARY.
11. CONTRACTOR SHALL POST FIBER WARNING SIGNS, EVERY ±2640ft IN RURAL AREAS AND ±1320ft IN URBAN AREAS, AT EVERY HANDHOLE, BOTH SIDES OF ROAD CROSSING AND CHANGES IN DIRECTION, CONDUIT SPLICE LOCATED BETWEEN HANDHOLES (EXCEPT IN SIDEWALKS OR OTHER IMPRACTICAL URBAN AREAS). MARKERS SHALL BE PLACED IN AS CLOSE PROXIMITY AS POSSIBLE TO PERMANENT OBJECTS TO PROVIDE PROTECTION, WITHOUT OBSCURING THE MAKER FROM VIEW. MARKERS SHALL BE ORIENTATED AND PLACED FOR MAXIMUM VISIBILITY. IN RUAL AREAS THE DECAL SHALL FACE ONCOMING TRAFFIC TO BE VISIBLE TO A DRIVER.
12. CONTRACTOR SHALL PROVIDE COMPLETE AS-BUILT PLANS TO IDENTIFY RUNNING LINE LOCATION. PROVIDE GPS COORDINATES IN NAD-83 FORMAT, WITH SUB-METER ACCURACY (N000.00000000, W000.00000000) FOR ALL CONDUIT SPLICE POINTS, HANDHOLES, CHANGES IN DIRECTION AND ROAD CROSSING LOCATIONS, PER CVIN SPECIFICATIONS.
13. CONTRACTOR SHALL PROVIDE CERTIFICATION LETTER STATING THAT ALL CONDUITS AND HANDHOLES HAVE BEEN INSTALLED, CLEANED AND TESTED PER CVIN SPECIFICATIONS.
14. CONTRACTOR SHALL PROVIDE CERTIFICATION LETTER STATING THAT TRACER WIRE HAS BEEN INSTALLED PER CVIN SPECIFICATIONS AND TESTED TO CONFIRM CONTINUITY FROM BEGINNING TO END.

811 DIGALERT CALL TOLL FREE (811) 48 HOURS BEFORE YOU DIG UNDERGROUND SERVICE ALERT

CVIN
7447 N. Palm Bluffs Ave., Ste. 105, Fresno, Ca. 93711

SAN JOAQUIN COUNTY PERMIT PLANS	DATE: 3/25/19	WORK ORDER: 5089
INSTALLATION OF FIBER OPTIC CONDUITS FOR VERIZON WIRELESS SAN JOAQUIN COUNTY NORTH	SCALE: —	SHEET: 1 of 12





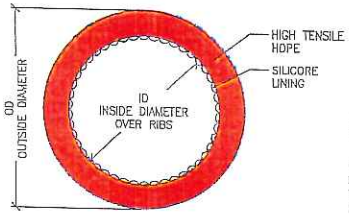
811 DIGALERT CALL TOLL FREE (811) 48 HOURS BEFORE YOU DIG UNDERGROUND SERVICE ALERT

CVIN 7447 N. Palm Bluffs Ave., Ste. 105, Fresno, Ca. 93711

SAN JOAQUIN COUNTY PERMIT PLANS

INSTALLATION OF FIBER OPTIC CONDUITS FOR VERIZON WIRELESS SAN JOAQUIN COUNTY NORTH

DATE:	WORK ORDER:
3/25/19	5089
SCALE: NTS	SHEET: 2 of 12



OUTSIDE DIAMETER: 1.660±0.005in
MINIMUM WALL: 0.151 in
MAXIMUM WALL: 0.171 in
INSIDE DIAMETER: 1.283 in (min.)

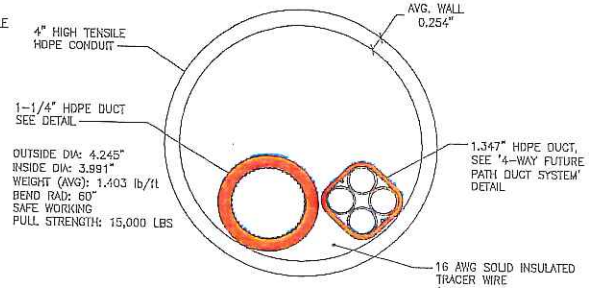
SAFE WORKING PULL STRENGTH: 1,989 lbs

WEIGHT: 0.319 lb/ft (avg.)
BEND RADIUS: 17 in
OVALITY: <5%

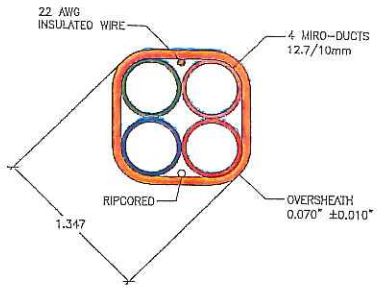
BRITTLENESS TEMP.: −75° C

* WALLS ARE ASTM SPECIFICATIONS. OTHER DATA MODIFIED TO INCLUDE RIBS.

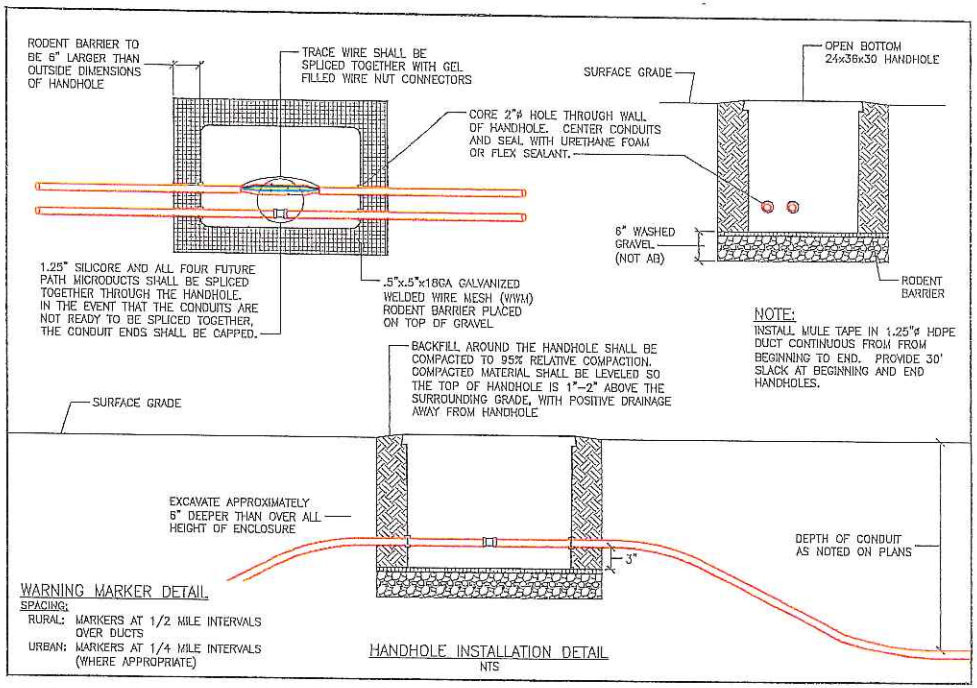
1.25"ø HDPE DUCT
NTS



ENCASEMENT DETAIL
NTS



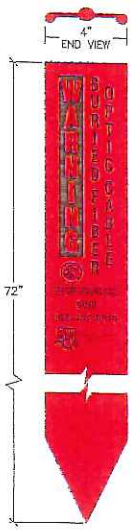
4-WAY FUTURE PATH DUCT SYSTEM DETAIL
NTS



NOTE:
INSTALL MULE TAPE IN 1.25"ø HDPE DUCT CONTINUOUS FROM FROM BEGINNING TO END. PROVIDE 30' SLACK AT BEGINNING AND END HANDHOLES.

WARNING MARKER DETAIL
SPACING:
RURAL: MARKERS AT 1/2 MILE INTERVALS OVER DUCTS
URBAN: MARKERS AT 1/4 MILE INTERVALS (WHERE APPROPRIATE)

HANDHOLE INSTALLATION DETAIL
NTS



NOTES:

1. THE RHINO HYBRID 3-RAIL SPECIALLY DESIGNED REINFORCING FIBERS ARE BLENDED WITH UV STABLE PLASTIC TO CREATE A FLAT POST WITH THE BRIGHT COLOR OF PLASTIC AND THE IMPACT RESISTANCE OF THE COMBINED FIBERGLASS AND PLASTIC. IT'S DESIGN ALLOWS THE POST TO BEND OVER WHEN HIT, THEN SNAP BACK INTO IT'S NORMAL UPRIGHT POSITION.
2. CONTRACTOR IS RESPONSIBLE FOR POSTING OF THESE RHINO FIBER 3-RAIL WARNING SIGNS PER MANUFACTURER'S INSTALLATION STANDARDS, EVERY ±2640 FEET (1/2-MILE) IN RURAL AREAS AND IN THE URBAN AREAS EVERY ±1320 FEET (1/4-MILE), AND AT EVERY HANDHOLE AND ANY CONDUIT SPLICE LOCATED BETWEEN HANDHOLES (EXCEPT IN SIDEWALKS OR OTHER IMPRACTICAL URBAN AREAS), TO ENSURE THE FIBER AND STRUCTURE CAN BE LOCATED AND IS NOT DAMAGED IN THE FUTURE.
3. WARNING SIGNS AND DECALS SHALL BE SUPPLIED BY OWNER. CONTRACTOR SHALL NOTIFY OWNER OF ALL MID PAN CONDUIT SPLICES AS THAT QUANTITY IS NOT ACCOUNTED FOR IN THE BID UNIT QUANTITY SUMMARY.

WARNING SIGN – RHINO 3 RAIL FIBER OPTIC CABLE MARKER
NTS

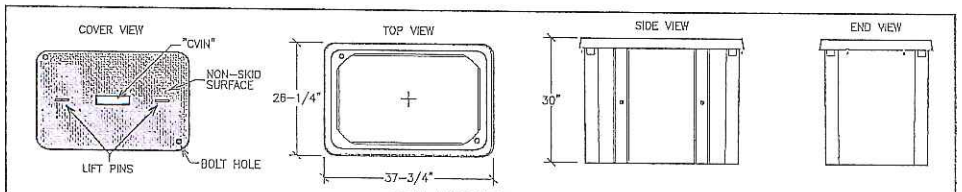
MATERIALS:

1.1 PERMA-GUARD CONDUIT SHALL BE MADE FROM HIGH-DENSITY POLYETHYLENE (HDPE). THE HDPE SHALL MEET OR EXCEED THE PROPERTIES LISTED IN ASTM D-3350 FOR MINIMUM CELL CLASSIFICATION OF 335480 C (MINIMUM 2% CARBON BLACK) OR E (COLOR WITH UV STABILIZER). PROPERTIES ARE LISTED BELOW IN TABLE 1.1

TABLE 1-1
Material Requirements

Cell	Properties	Requirements	Test Method
3	Density	>0.940-0.947	ASTM D 792 or 1505
3	Melt Flow Index (190/2.160)	<0.4-0.15g/10 minutes max	ASTM D 1238
5	Flexural Modulus	110,000 to 160,000 psi	ASTM D 790
4	Tensile Strength at Yield	3000-<3500 psi	ASTM D 638
8	Environmental Stress Crack Resistance	Condition B, F Max, 10% Igepal, 96hrs, minimum	ASTM D 1693
0	Hydrostatic Design Basis	Not Pressure Rated	ASTM D 2837
---	Brittleness Temperature	−75° C	ASTM D 746
---	Elongation	400% minimum	ASTM D 638
C	Class C	Minimum 2% Carbon Black	ASTM D 3350
E	Class E	Colored with UV Stablizer	ASTM D 3350

CONDUIT DATA



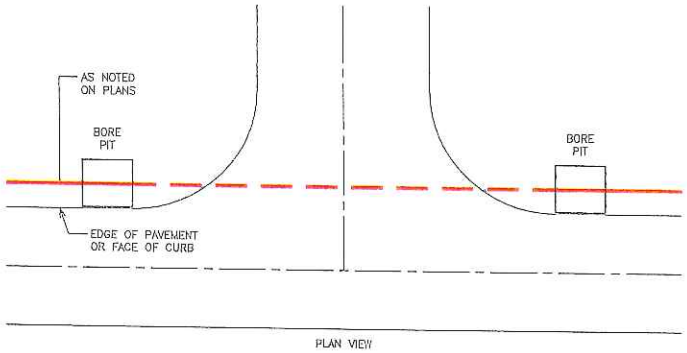
CVIN HANDHOLE DETAIL
CHANNELL SGL8 (OR EQUAL) – POLYMER CONCRETE RING AND COVER RATED 20 KIPS

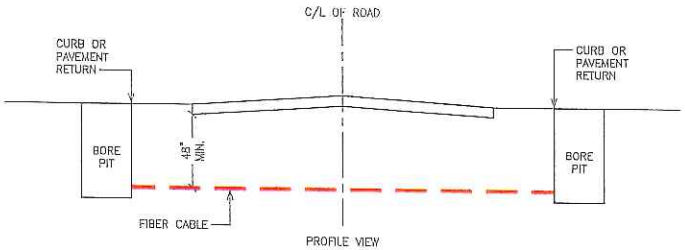
DIGALERT
CALL TOLL FREE (811) 48 HOURS BEFORE YOU DIG UNDERGROUND SERVICE ALERT

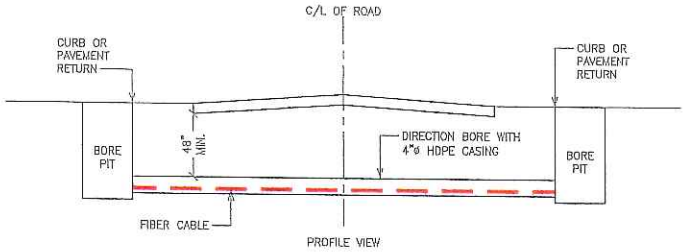
CVIN
7447 N. Palm Bluffs Ave., Ste. 105, Fresno, Ca. 93711

SAN JOAQUIN COUNTY PERMIT PLANS
INSTALLATION OF FIBER OPTIC CONDUITS FOR VERIZON WIRELESS
SAN JOAQUIN COUNTY NORTH

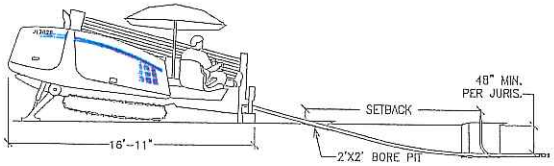
DATE:	WORK ORDER:
3/25/19	5089
SCALE:	SHEET:
--	3 of 12



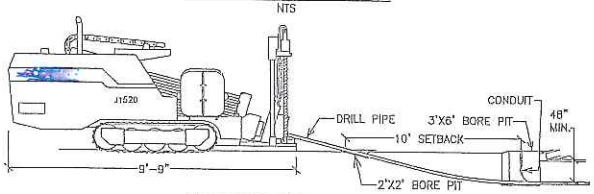




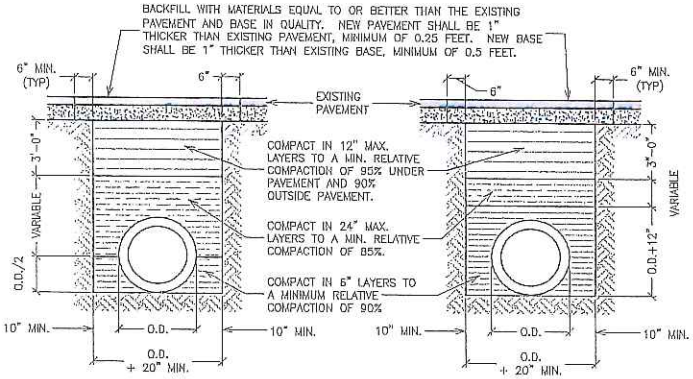
TYPICAL BORE DETAIL AT STREET INTERSECTION
NOT TO SCALE



LONGITUDINAL HDD METHOD
NTS



TRANSVERSE HDD METHOD
NTS



RIGID CONDUIT

FLEXIBLE CONDUIT

BORE PITS / RECEIVING PITS

1. ALL BORE/RECEIVING PITS SHALL BE STEEL PLATED WHEN NOT IN USE.
2. ALL BORE/RECEIVING PITS THAT ARE WITHIN THE CLEAR RECOVERY ZONE NEED TO BE PROTECTED BY K-RAIL AND CRASH CUSHIONS.
3. BORE/RECEIVING PITS SHALL ONLY BE OPEN FOR 2-3 HOURS MAXIMUM AND FILLED IN COMPLETELY BEFORE THE END OF EACH WORK DAY.
4. BORE PITS ARE AREA STANDARD 1-FT WIDE BY 4-FT LONG AND 4-FT DEEP.
5. RECEIVING PITS ARE A STANDARD 3-FT WIDE BY 3-FT LONG AND 4-FT DEEP.
6. ALL BORE/RECEIVING PITS SHALL BE SURROUNDED BY CONTINUOUS STRAW WATTLES AS REQUIRED PER SWPPP.

NOTES:

1. REFERENCE SAN JOAQUIN STANDARD DRAWING R29 FOR TRENCH BACKFILL AND COMPACTION REQUIREMENTS.
2. RELATIVE COMPACTION OF MATERIALS SHALL BE TESTED IN ACCORDANCE WITH THE STATE OF CALIFORNIA, DEPT. OF TRANSPORTATION TESTING MANUALS, TEST METHOD NO. CALIFORNIA 216 OR 231.
3. ALL EXISTING PAVEMENT SHALL BE NEATLY CUT TO LINE PRIOR TO TRENCH EXCAVATION.
4. WHEN SHOWN BY SOIL COMPOSITION AND COMPACTABILITY, NINETY PERCENT (90%) COMPACTION MAY BE USED, WHEN APPROVED BY THE DIRECTOR OF PUBLIC WORKS.
5. SPECIAL BEDDING REQUIREMENTS MAY BE SHOWN ON THE PLANS OR SPECIFIED IN SPECIAL PROVISIONS.
6. SHOULDERS SHALL BE AS SHOWN ON THE PLANS OR SPECIFIED IN THE SPECIAL PROVISIONS BUT IN NO CASE SHALL THE SHOULDER BE LESS THEN THREE FEET WIDE AS MEASURED FROM THE EDGE OF PAVEMENT.
7. JETTING OR PONDING WILL BE PERMITTED WITH IN THE STREET RIGHT-OF-WAY WITH A 3-YEAR BOND, WHEN APPROVED BY THE DIRECTOR OR PUBLIC WORKS

811 DIGALERT CALL TOLL FREE (811) 48 HOURS BEFORE YOU DIG UNDERGROUND SERVICE ALERT

CVIN
7457 N. Palm Bluffs Ave., Ste. 105, Fresno, Ca. 93711

SAN JOAQUIN COUNTY PERMIT PLANS	DATE: 3/25/19	WORK ORDER: 5089
INSTALLATION OF FIBER OPTIC CONDUITS FOR VERIZON WIRELESS SAN JOAQUIN COUNTY NORTH	SCALE: –	SHEET: 4 of 12

All signs must meet MUTCD standards.

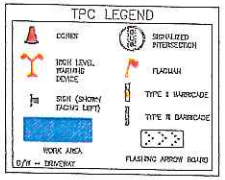
SUGGESTED ADVANCE WARNING SIGN PLACEMENT

SPEED (MPH)	MINIMUM TAPER LENGTH FOR WIDTH OF OFFSET 12 FT (W)				BUFFER SPACE (FT)
	MERGING (FT)	SHIFTING (FT)	SHOULDER (FT)	DOWN STREAM (FT)	
20	80	40	27	100	115
25	125	63	42	100	155
30	180	90	60	100	200
35	245	123	82	100	250
40	320	160	107	100	305
45	540	270	180	100	360
50	600	300	200	100	425
55	660	330	220	100	495
60	720	360	240	100	570
65	780	390	260	100	645
70	840	420	280	100	820

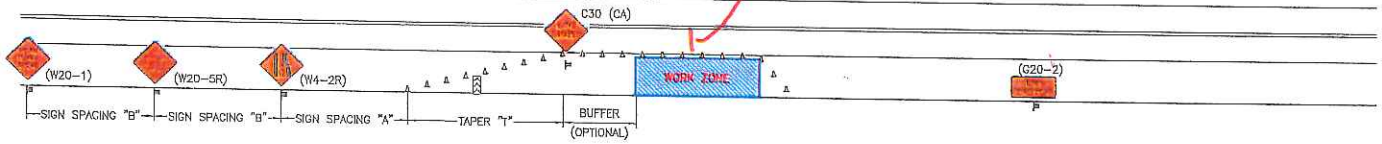
ROAD TYPE	DISTANCE BETWEEN SIGNS**		
	A	B	C
URBAN (LOW SPEED) 25 MPH OR LESS	100	100	100
URBAN (HIGH SPEED) 25 MPH TO 40 MPH	250	250	250
URBAN (HIGH SPEED) 40 MPH OR MORE	350	350	350
RURAL	500	500	500
EXPRESSWAY/FREEWAY	1,000	1,500	2,640

* SPEED CATEGORY TO BE DETERMINED BY HIGHWAY AGENCY.

** DISTANCES SHOWN IN FEET. THE A DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN. THE B DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS. THE C DIMENSION IS THE DISTANCE BETWEEN THE SECOND AND THIRD SIGNS. (THE THIRD SIGN IS THE FIRST ONE IN A THREE-SIGN SERIES ENCOUNTERED BY A DRIVER APPROACHING A TTC ZONE).

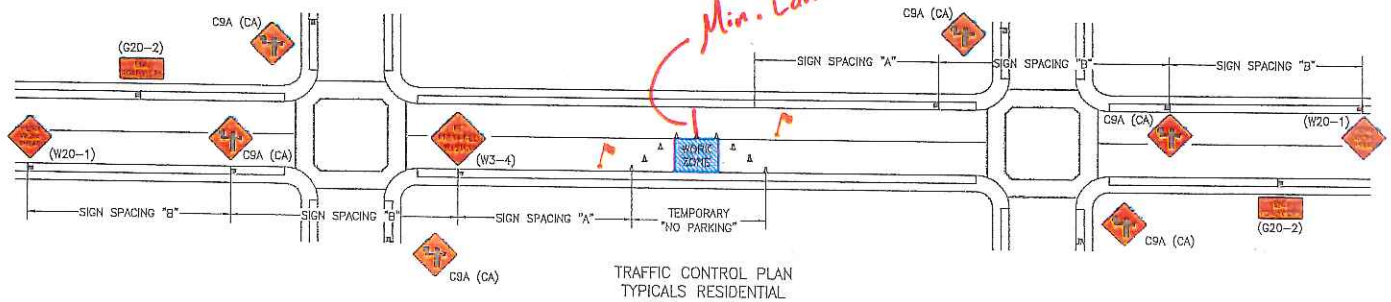


Min. Lane width = 10' wide.



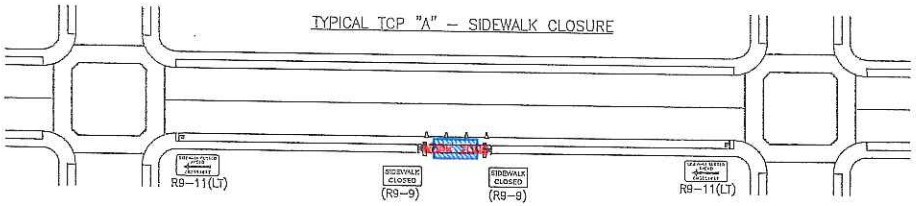
TYPICAL LANE CLOSURE

Min. Lane width = 10' wide



TRAFFIC CONTROL PLAN
TYPICALS RESIDENTIAL
ROAD – FLAGMEN

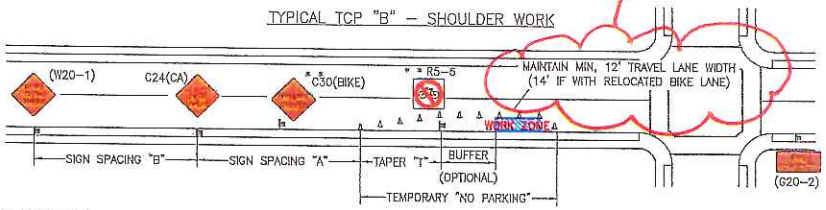
TYPICAL TCP "A" – SIDEWALK CLOSURE



TRAFFIC CONTROL PLAN TYPICALS
EDGE OF ROAD WORK ZONE

good.

TYPICAL TCP "B" – SHOULDER WORK



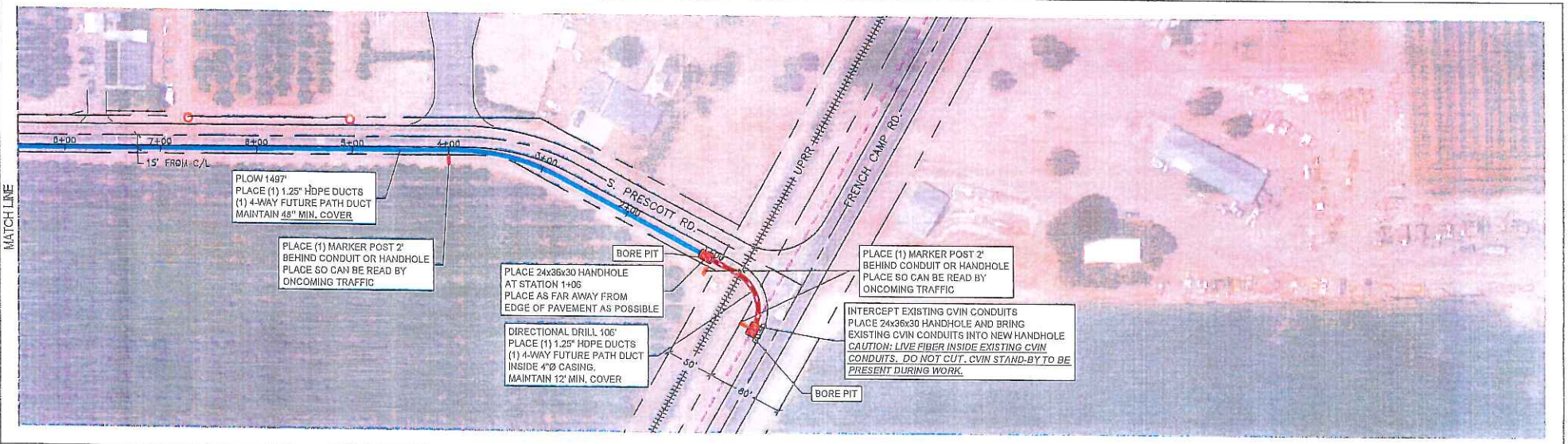
* * = BIKE LANE AS REQUIRED

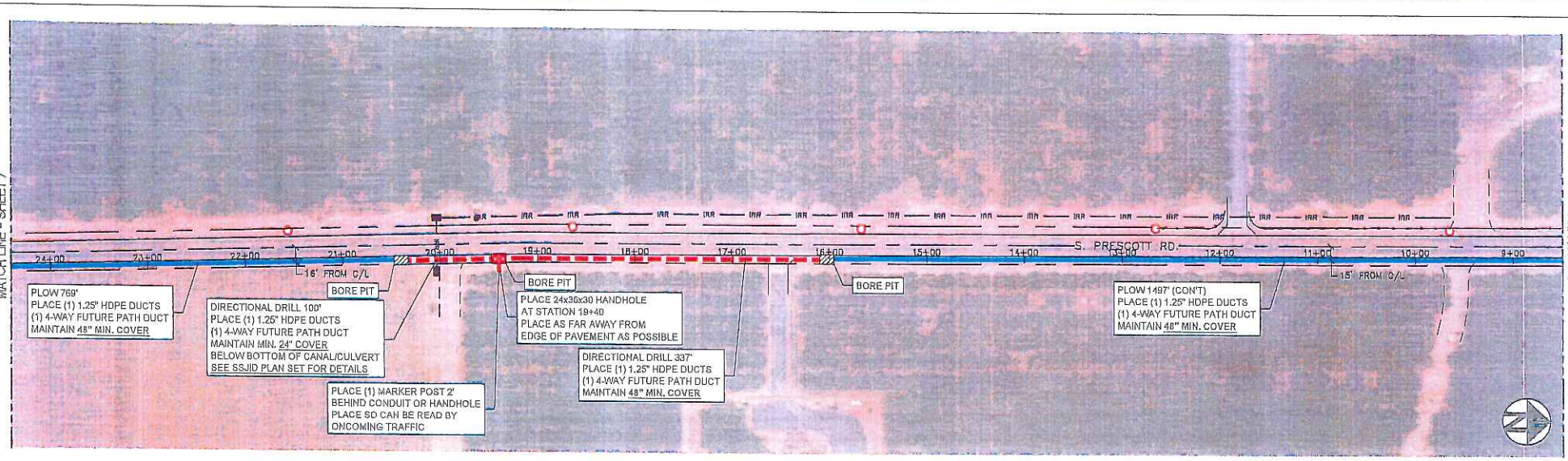
DIGALERT CALL TOLL FREE (811) 48 HOURS BEFORE YOU DIG UNDERGROUND SERVICE ALERT

CVIN 7447 N. Palm Bluffs Ave., Ste. 105, Fresno, Ca. 93711

SAN JOAQUIN COUNTY PERMIT PLANS
INSTALLATION OF FIBER OPTIC CONDUITS FOR VERIZON WIRELESS
SAN JOAQUIN COUNTY NORTH

DATE:	WORK ORDER:
3/25/19	5089
SCALE: –	SHEET: 5 of 12





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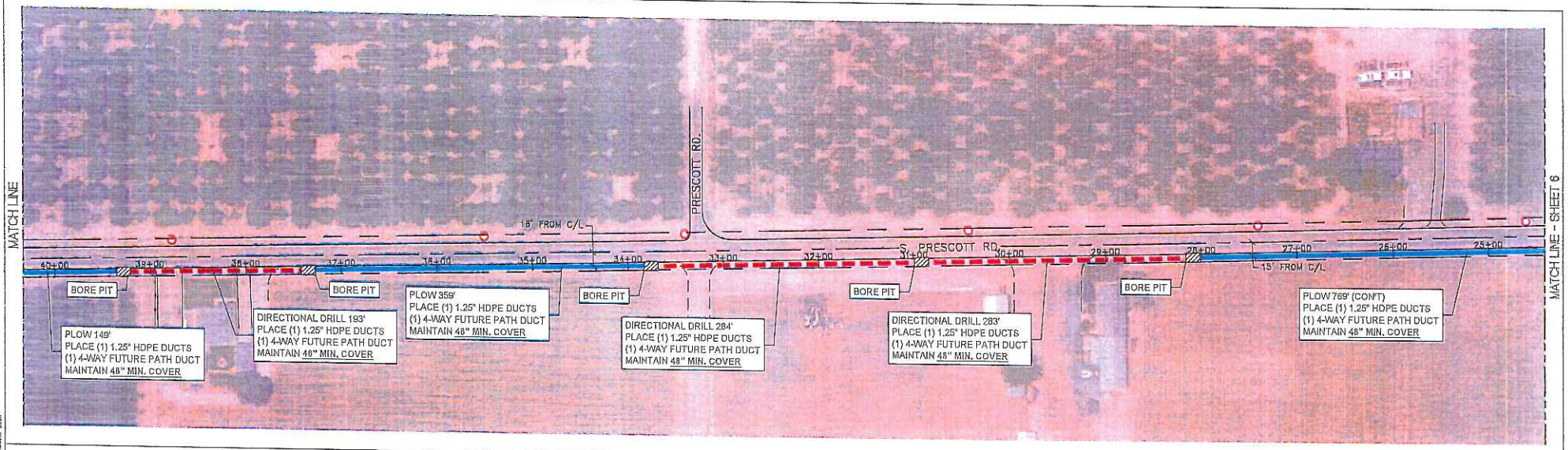
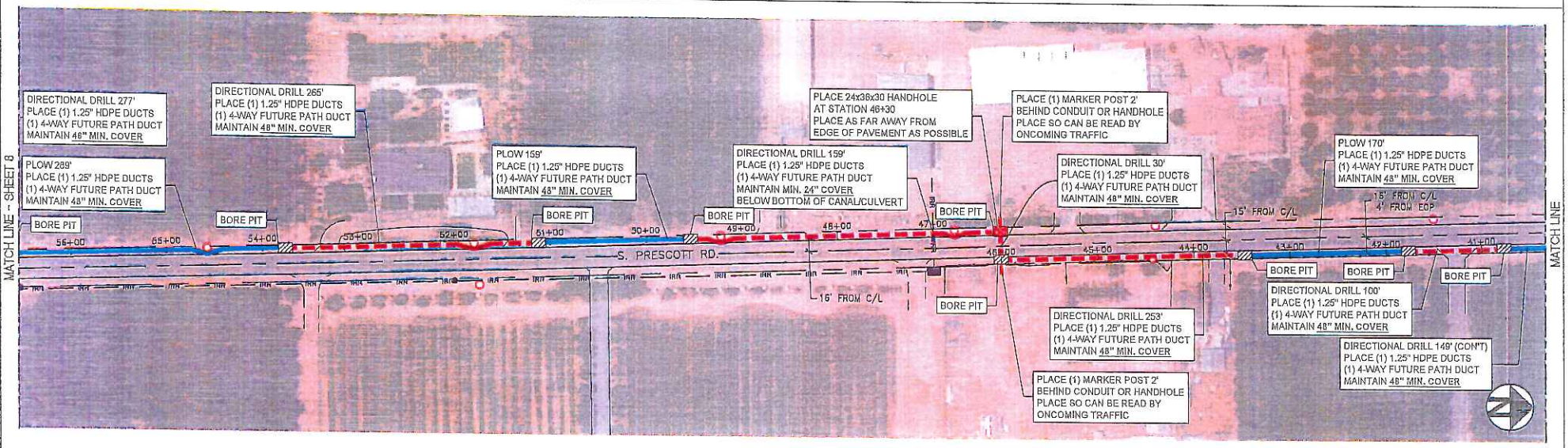
VERIZON WIRELESS
SAN JOAQUIN COUNTY NORTH

DATE:	WORK ORDER:
3/25/19	5089
SCALE:	SHEET:
1" : 100'	6 of 12





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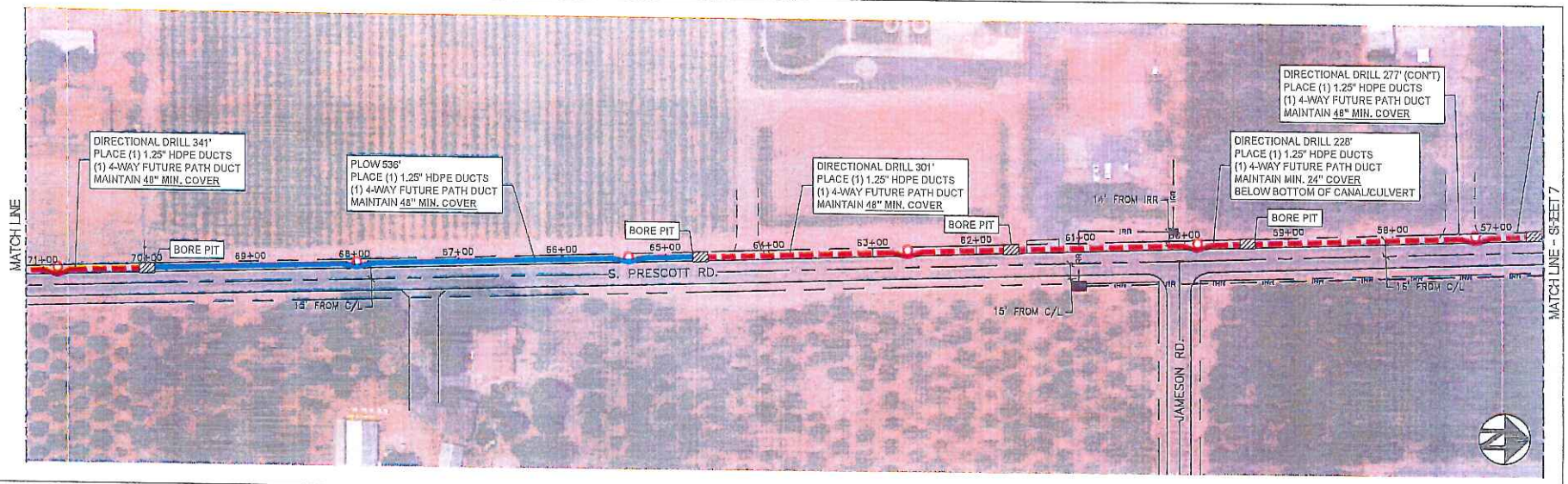
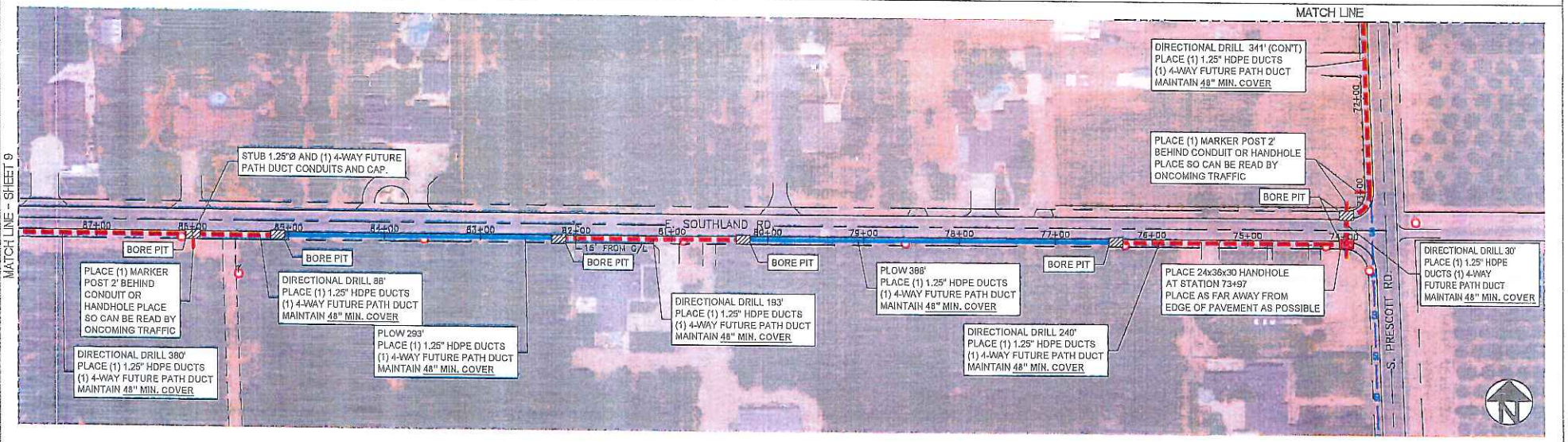
DATE:	WORK ORDER:
3/25/19	5089
SCALE:	SHEET:
1" : 100'	7 of 12





811 DIGALERT
CALL TOLL FREE (811) 48 HOURS BEFORE YOU DIG UNDERGROUND SERVICE ALERT

CVIN
7417 N. Palm Bluffs Ave., Ste. 105, Fresno, Ca. 93711

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INSTALLATION OF FIBER OPTIC CONDUITS FOR
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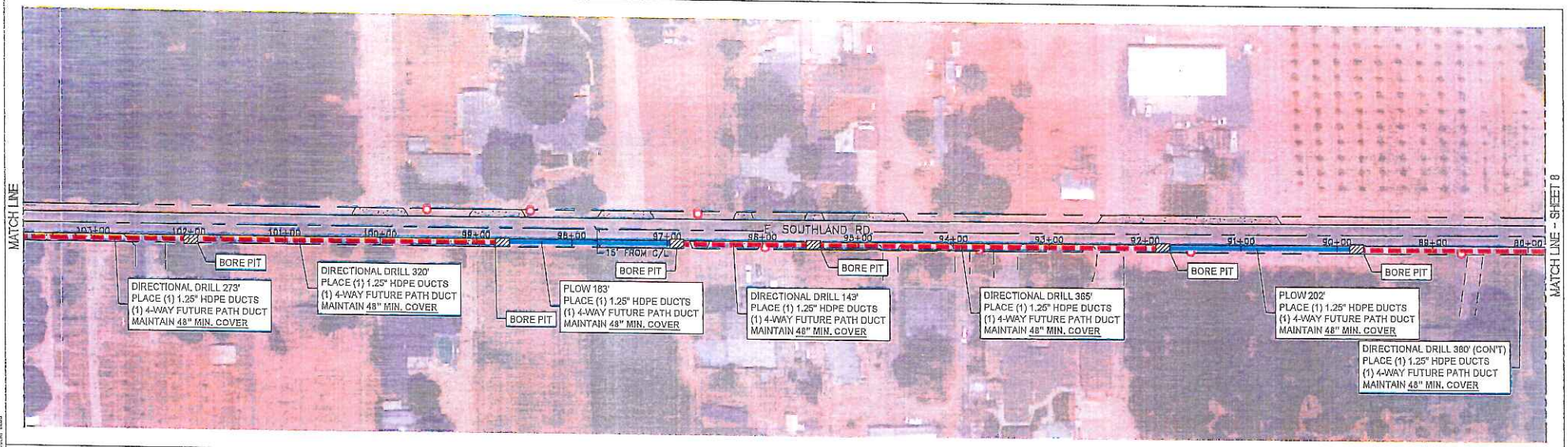
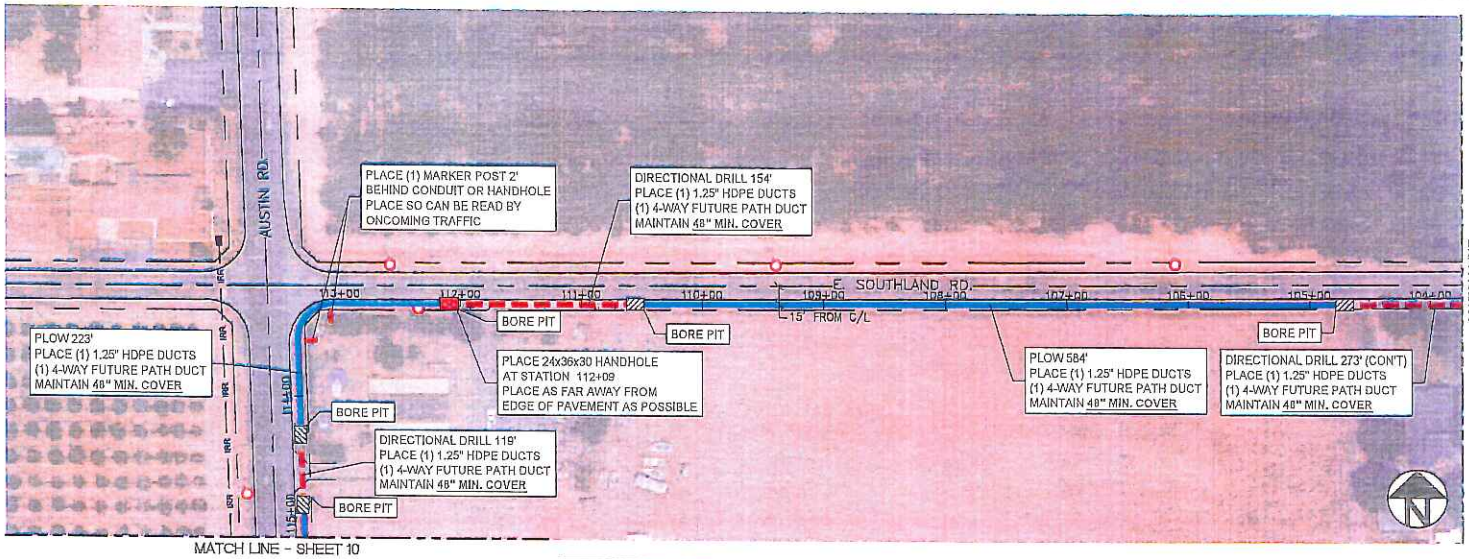
SAN JOAQUIN COUNTY NORTH

DATE:	WORK ORDER:
3/25/19	5089
SCALE:	SHEET:
1" : 100'	8 of 12





MATCH LINE - SHEET 10

DIGALERT
CALL TOLL FREE
811 48 HOURS
BEFORE YOU DIG
UNDERGROUND
SERVICE ALERT

CVIN
7447 N. Palm Bluffs Ave., Ste. 105, Fresno, Ca. 93711

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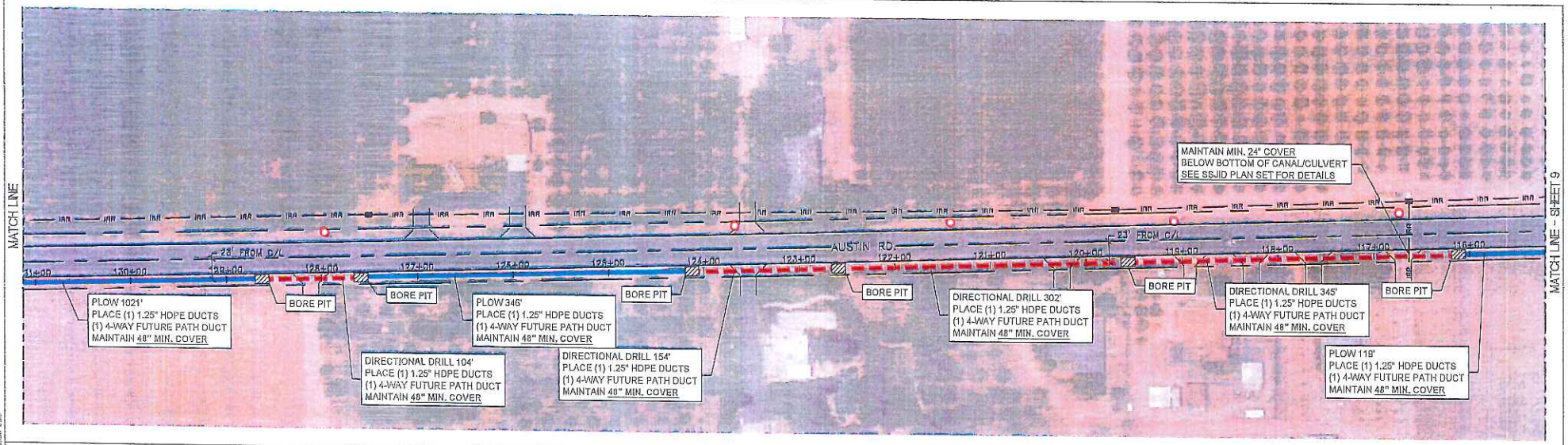
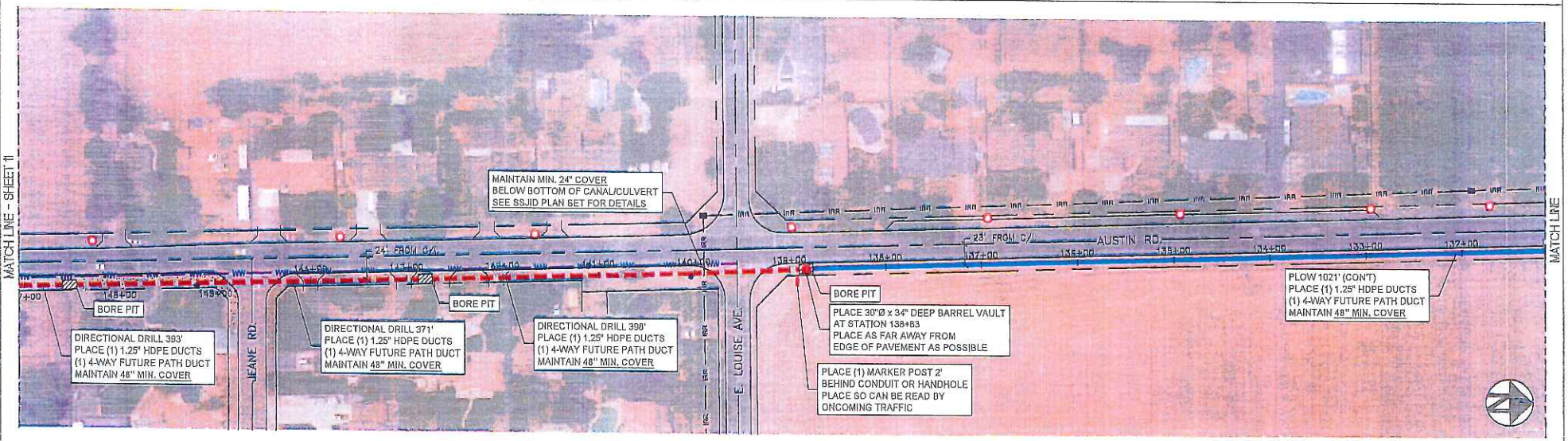
SAN JOAQUIN COUNTY NORTH

DATE:	WORK ORDER:
3/25/19	5089
SCALE:	SHEET:
1" : 100'	9 OF 12





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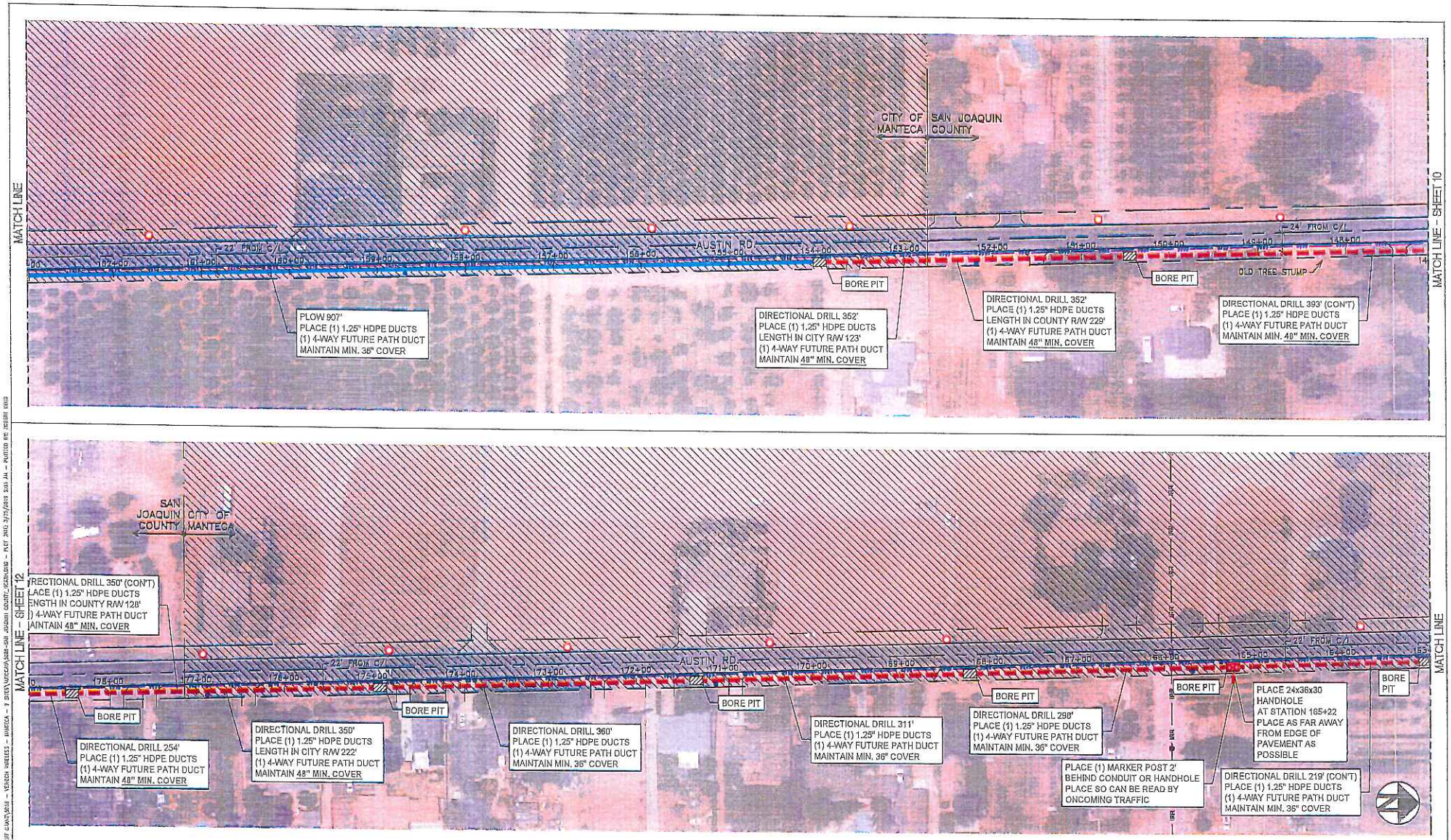
1" : 100'	10 of 12



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DATE:	WORK ORDER:
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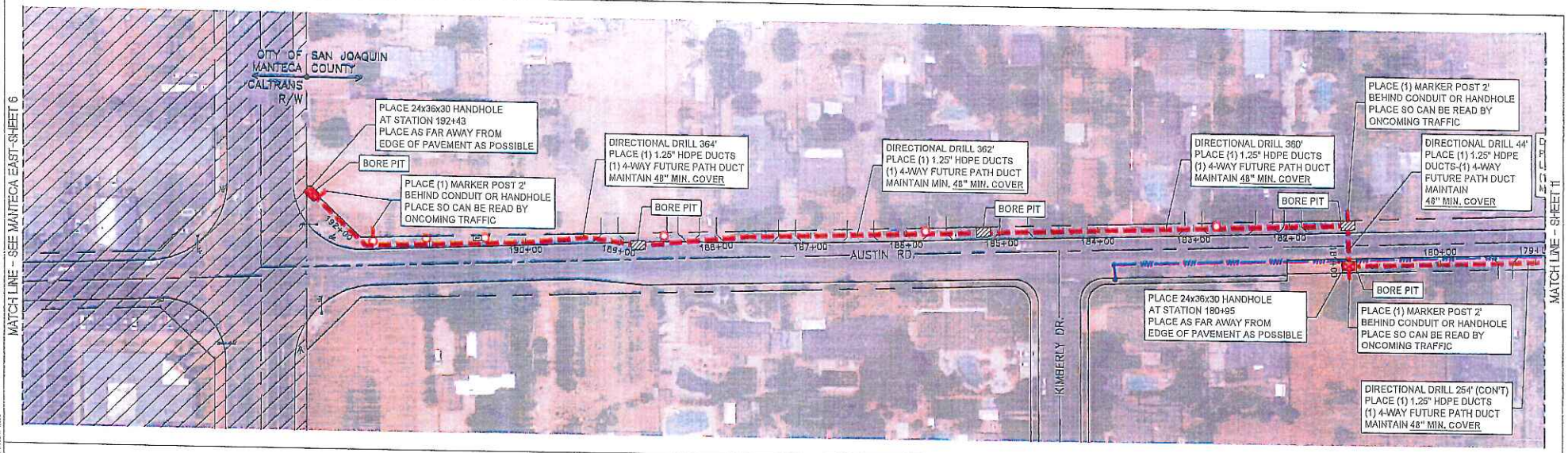
SCALE: 1" : 100'	SHEET: 11 OF 12



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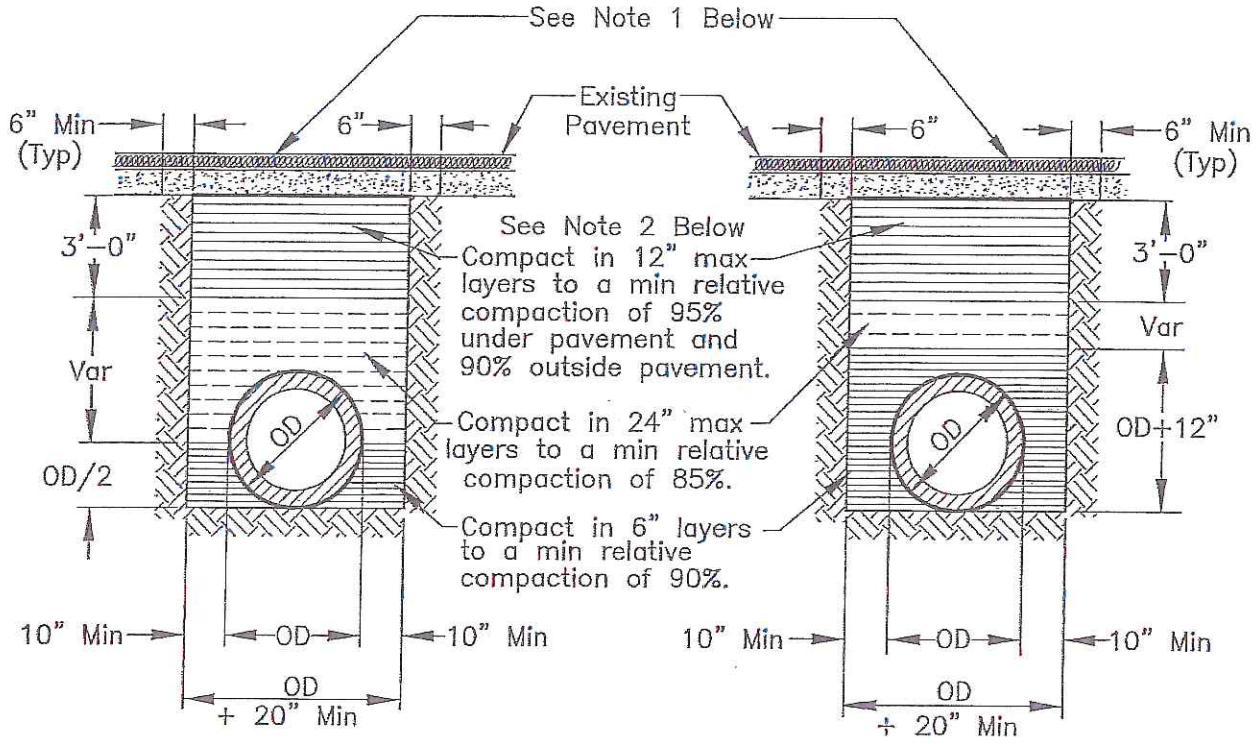
INSTALLATION OF FIBER OPTIC CONDUITS FOR VERIZON WIRELESS SAN JOAQUIN COUNTY NORTH	SCALE: 1" : 100'	SHEET: 12 of 12



RIGID CONDUIT

FLEXIBLE CONDUIT

NOTES:

1. New pavement shall be 1" thicker than existing pavement, minimum of 0.25 Ft. New base shall be 1" thicker than existing base, min of 0.50 Ft.
2. Select native material or imported granular material as approved by the Director of Public Works. Backfill with materials equal to or better than the existing pavement and base in quality.
3. Relative compaction of materials shall be tested in accordance with the State of California, Dept. of Transportation Testing Manuals, test method No. California 216 or 231.
4. All existing pavement shall be neatly cut to line prior to trench excavation.
5. Jetting or ponding will be permitted within the street right-of-way with a 3 year bond, when approved by the Director of Public Works.
6. When shown by soil composition and compactability, ninety percent (90%) compaction may be used, when approved by the Director of Public Works.
7. Special bedding and backfill requirements may be shown on the plans or specified in the special provisions.

Public Works San Joaquin County
Working for YOU

TYPICAL TRENCH BACKFILL

COUNTY OF SAN JOAQUIN
DEPARTMENT OF PUBLIC WORKS

Date: DEC 2014

Approved by: Thomas M. Flow

No.	Revision Description	Date

Std. Dwg. No. **R-29**

GENERAL PROVISIONS
GOVERNING INSTALLATION OF SUBSURFACE STRUCTURES AND PIPELINES WITHIN COUNTY ROAD RIGHTS-OF-WAY

PUBLIC CONVENIENCE AND SAFETY:

A. Before obstructing any private driveway entrance or County road traveled way with a trench, spoil bank, equipment or other barrier permitted for any prolonged period of time, the Permittee shall notify the known users of the respective thoroughfare(s) involved, and shall provide access for vehicular and pedestrian traffic to and from the road.
   1. Unless otherwise permitted, all work shall be conducted in such a manner that no less than one lane of the existing County road traveled way will be maintained open to public traffic during working hours in a smooth and safe riding condition(s). Two lanes shall be open after working hours.
   2. In cases where road closure is permitted, the permission to close the road will be granted under the condition that the Permittee notify the following persons and/or agencies of the time, the period of closure, and the detour route at least twenty-four (24) hours prior to said road closure.
      a. The County of San Joaquin Public Works Department
      b. The County of San Joaquin Sheriff's Office
      c. The local postal service
      d. The local fire district
      e. The local school district
      f. The local residents involved

B. Should hazardous conditions relative to the installation operations warrant flagmen, as many capable flagmen as may be necessary shall be provided by the Permittee and stationed in advance of work to warn and direct traffic.

C. Lights, signs and barricades shall be furnished, erected and maintained by the Permittee for the adequate warning and convenience of the public, with particular attention to be taken in this regard after dark.

D. Any excess dirt and/or debris which might be a hazard to either automobile or pedestrian traffic, uncontrollable by lights, signs and barricades, shall be removed from the jobsite daily.

STRUCTURES:

A. Walls of structures shall be such quality and strength that they will resist all pressures and will not crack or be deformed in such a way as to create a hazard or maintenance problem at any time. Therefore, the minimum structural requirements for concrete pipe placed under county road rights-of-way shall conform to the following American Association of State Highway and transportation Officials (AASHTO) designations.
   1. For concrete pipe up to and including thirty-three inches (33") inside diameter, extra strength concrete conforming to AASHTO Designation M 170M.
   2. For concrete pipe thirty-six inches (36") inside diameter and larger, reinforced concrete pipe conforming to AASHTO Designation M 170M Class III.
   3. Plastic pipe conforming to AASHTO Designation M294.

B. All concrete pipe joints with County road rights-of-way shall be sealed against leakage and/or infiltration with rubber gasket in conformance with Section 65-1:06 of the California Standard Specifications, or with other methods as may be permitted under the Special Provisions.

C. Cast-in-place concrete pipe, vitrified clay pipe, spiral welded steel pipe, or corrugated aluminum alloy pipe shall not be installed within the County road rights-of-way unless specifically so stated in the Special Provisions, and only under the conditions as provided.

D. All structures to be buried within the County rights-of-way shall be set at such elevations as to allow minimum coverage of thirty inches (30") to the centerline of the roadways and twelve inches (12") at the bottoms of borrow ditches each side of the roadways. The depths of structures shall be established below a flat plane extending across the rights-of-way, no part of which shall extend above the elevations stated above; manholes, lampholes, valves, etc. not included. Future surface elevations shall be anticipated as nearly as possible and structure elevations shall be established for future adjustments accordingly.

E. The County hereby reserves the right to specify in the Special Provisions the gage and surface treatment of any galvanized corrugated metal pipe that is to be installed.

F. All longitudinal utility facilities are to be established (and dimensioned on sketches) from surveyed centerline of road right-of-way, not from right-of-way (border) lines.

REPAIRS OF THE COUNTY RIGHT-OF-WAY:

A. All excavations shall be backfilled and compacted immediately after work therein has been completed.

B. Trenched shall not be left open farther than 300 feet in advance of pipe laying operations, or 200 feet to the rear thereof, unless otherwise permitted by the Engineer.

C. Unless otherwise permitted under the Special Provisions, backfill shall be placed and mechanically compacted in such a manner that the relative compaction throughout the entire fill within the County road right-of-way shall conform to the percentages of compaction as shown on the Trench detail.

D. Backfill material shall be placed in horizontal uniform layers not to exceed in thickness, before compaction, 0.67 foot in the bedding region, one –foot where 90% compaction is required, and two-feet where 80% compaction is required.

E. No portion of the excavation(s) shall be compacted by ponding or jetting unless a maintenance bond is provided.

F. Gravel backfill material shall be utilized only where specifically so stated on the face of the permit. It shall be compacted by means of a high-frequency internal vibrator, the compactor to be a size and type approved by the Engineer. Points of compaction shall not be greater than 18" centers and to the full depth of the lift.

G. All pavements, curbs, gutters, sidewalks, borrow ditches, pipes, head walls, road signs, trees, shrubbery, and/or other permanent road facilities impaired by or as a result of construction operations at the construction site(s) occupied by materials and/or equipment, shall be restored immediately upon backfilling of the excavation to the original grades and cross sections, and to a condition as good as, or better than existing prior to construction.

H. All surfacing materials of roadways and driveway approaches cut or damaged by or as a result of construction operations, shall be replaced within ONE WEEK following the backfilling of excavation, weather permitting, with compacted layers of surfacing materials at least as thick as the existing, and no less than two inches (2") of asphalt concrete over six inches (6") of aggregate base, both as specified below.
   1. Asphalt Concrete: Combined mineral aggregate shall conform to the quality and gradation requirements for Type "B" one-half inch(1/2) maximum aggregate, coarse or medium gradation as specified in Section 39 of the California Standard Specifications. The bituminous binder to be mixed with mineral aggregate shall be paving asphalt having (Grade PG 64-10), unless otherwise directed by the Engineer. Placement of asphalt concrete surfacing shall conform to the applicable provisions of Section 39 of the California Standard Specifications.
   2. Aggregate Base: Combined mineral aggregates shall conform to the quality and the grading for three-quarter inch (3/4") maximum size aggregate Class 2 Aggregate Base specified in Section 26 of the California Standard Specifications.

I. Before acceptance of repairs to the County road rights-of-way, all unsightly and detrimental dirt, dust and/or debris shall be removed and the construction areas left in a neat and presentable condition(s).
   1. If necessary, County road traveled way and driveway pavements shall be washed with water to remove dirt and dust.
   2. Driveway approaches and field entrance pavements damaged by equipment or spoil banks shall be repaired as directed by the Engineer.

J. Upon request by the County, any settlement, sagging of surface, or cracking of pavement shall be repaired immediately by and at the sole expense of the Permittee for a period of one year following acceptance of the work.

SPECIAL PROVISIONS

Winter Weather Utility Work

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1. SUPERVISION: The utility company (permittee) shall furnish full-time supervision of all work to insure compliance with the permit provision.

2. START OF WORK: No work within the County right-of-way shall be started until the utility company representative has made an evaluation of weather conditions and has determined the work can be accomplished under the provisions of the permit.

3. CLEAN PAVEMENT: Dirt and mud shall not be deposited on the pavement outside the area of work, and if inadvertently tracked onto the road travel way shall be removed immediately.

4. DAILY RESTORATION: Private driveways and road intersections shall be restored daily.

5. WEATHER-TIGHT CONDITIONS: All trenches shall be filled and compacted, ditches and other drainage facilities regarded and opened, and the entire work area restored to weather-tight condition prior to any rain.