



COUNTY OF SAN JOAQUIN

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

Permit No: PS-1700086
Date Issued: 01/13/2017
Start Date: 01/13/2017
Exp. Date: 02/15/2017
Project No: PWP7110005
Quad: SE

ENCROACHMENT PERMIT

To: WAVE BROADBAND
1225 E SUNSET DR 145 823
BELLINGHAM, WA 98226

Encroachment Type:

Bore (up to 12 inch Dia)	Bell Hole		
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Location:

E/S MCKINLEY AVE @ EL DORADO ST

In compliance with your request of 01/13/2017, 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: \$549.00

KRIS BALAJI, Director
Department of Public Works

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

By: 
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 10/11/16

To: San Joaquin County
Department of Public Works

Wave Broadband
(Applicant Name)

215 Mason Circle
(Mailing Address)

Concord, CA, 94520
(City, State, Zip Code)

(415) 516-3902
(Area Code - Telephone Number)

OFFICE USE ONLY			
JOB #	<u>110005</u>	REF #	
APN		CR #	
EXP. DATE	<u>2-15-17</u>		
VALID	<u>1-13-17</u> TO <u>2-15-17</u>	DRIVEWAYS:	
STREET	<u>McKinley Ave</u>	*	
AREA	<u>Stockton</u> QUAD <u>SE</u>	*	
TYPE	<u>BOFP</u>	*	
FORMS	<u>SSWH R29</u>		
NOTES			

Sketch (Detailed plans may be submitted)
Please see attached construction permit drawing

The undersigned hereby applies for permission to excavate, construct and/or otherwise encroach on County Highway Right-of-Way on the East side of El Dorado St + McKinley Ave. approximately 40 feet/mile 0 of McKinley Ave, El Dorado St, by performing the following work (description of work):
Placing conduit by directional bore method.

Work will commence on or about ASAP for approximately 30 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.

 CHRISTIAN SILVA - PERMIT TECH
Signature of Applicant - Title

10/11/16
Date

wave ASTOUND BROADBAND

PROJECT #9967 EL DORADO ST AND MCKINLEY AVE
UNDERGROUND CROSSING

CONTACT LIST

WAVE

JEREMY BUBENICK
FIBER CONSTRUCTION MANAGER
215 MASON CIRCLE
CONCORD, CA 94520
TEL: 415-516-3892
jbubentical@wavebroadband.com

SAN JOAQUIN COUNTY
PUBLIC WORKS DEPARTMENT
1810 E HAZELTON AVE
STOCKTON CA, 95205
TEL: (209) 468-3000

STRUCTURE LEASING & ENGINEERING INC

RAY DELGADO
CELL: 408-504-2486
EMAIL: RAYDELGADO@SLEGROUP.NET
NIK DELGADO
CELL: 408-666-3448
EMAIL: NIKDELGADO@SLEGROUP.NET

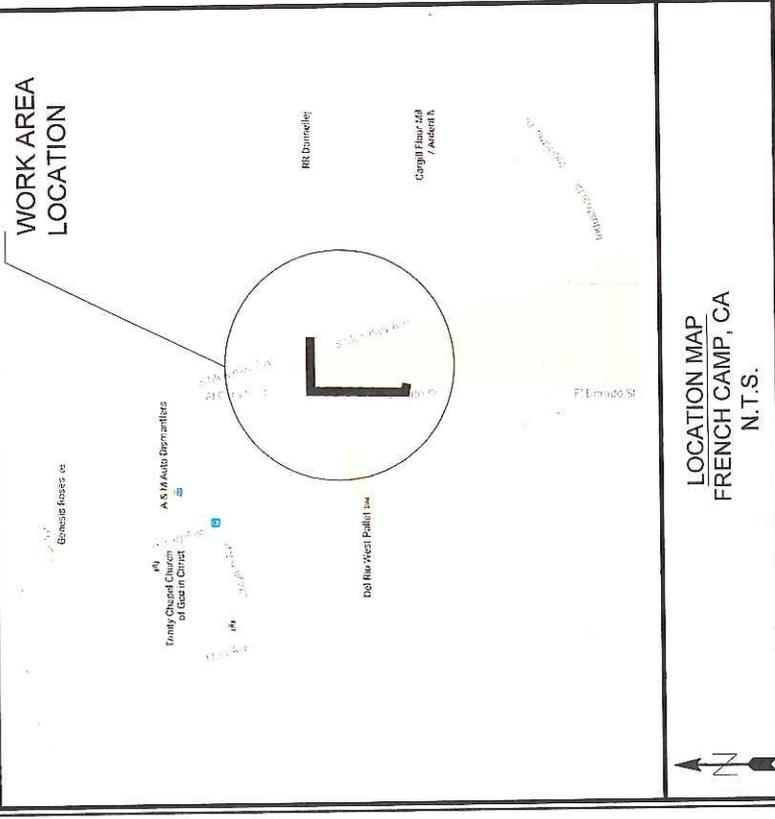


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01	COVER SHEET
02	CONSTRUCTION DRAWING
03	TYPICAL DETAILS
04	TRAFFIC CONTROL
05	TRAFFIC CONTROL
06	TRAFFIC CONTROL

CONTRACTOR
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 CONSTRUCTION NOTES

- CONTACT "USA" FOR UNDERGROUND UTILITY LOCATES, 48 HOURS PRIOR TO CONSTRUCTION. CA PHONE NO.: 1-800-227-2600
- CONTRACTOR TO FOLLOW ALL OSHA, LOCAL, STATE, AND BUILDING CODES.
- CONTRACTOR TO VERIFY ALL DIMENSIONS & MATERIALS REQUIRED.
- MAINTAIN A MINIMUM 6' SWEEP ON ALL CONDUIT BENDS.
- PLACE PULL ROPES IN ALL CONDUIT & INNERDUCTS.
- CONTRACTOR MUST CLEAN UP WORK AREAS AT THE END OF EACH WORK DAY & REMOVE TRASH & DEBRIS FROM WORK SITE.
- CONTRACTOR WILL GROUT & SEAL ALL BUILDING ENTRANCES WITH APPROVED MATERIALS.
- PLACE BUSHINGS ON ALL CONDUIT ENDS FOR CABLE PROTECTION.
- PLACE TRIPLEX & BLANK DUCT PLUGS AT BUILDING ENTRANCE CONDUITS.
- CONTRACTOR IS RESPONSIBLE FOR REPAIR/REPLACEMENT OF DAMAGED FACILITIES AND/OR PROPERTY.
- ALL EXISTING UTILITIES WILL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
- ALL WORK TO BE PERFORMED PER CONSTRUCTION SPECIFICATION UNLESS OTHERWISE DIRECTED BY PROPERTY MANAGEMENT.
- THE CONTRACTOR WILL PROVIDE AS-BUILT RECORDS TO BE GIVEN TO MANAGEMENT UPON COMPLETION OF CONSTRUCTION.
- CONTRACTOR TO COMPLY WITH TRAFFIC CONTROL PLAN USE APPROPRIATE ATTACHMENT.
- ALL EXISTING UTILITIES MUST BE POTHOLED BEFORE BEGINNING CONSTRUCTION.
- PLACE A 12" AVG SOLID (0.0608" DIAMETER) TRACER WIRE ALONG WITH THE CONDUIT INSTALLATION TO BE TERMINATED ON AN ACCEPTABLE TERMINATION BLOCK IN EACH HANDHOLE/IN/ LOCATION.

811 DIGALERT
CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
(811)
Know what's below.
Call before you dig.

PLAN REVISIONS		DATE	DESCRIPTION	BY
REV.	DATE	DESCRIPTION	BY	

STRUCTURE LEASING & ENGINEERING INC
RAY DELGADO
CELL: 408-504-2486
EMAIL: RAYDELGADO@SLEGROUP.NET
NIK DELGADO
CELL: 408-666-3448
EMAIL: NIKDELGADO@SLEGROUP.NET

AGENCY: SAN JOAQUIN COUNTY
REF#

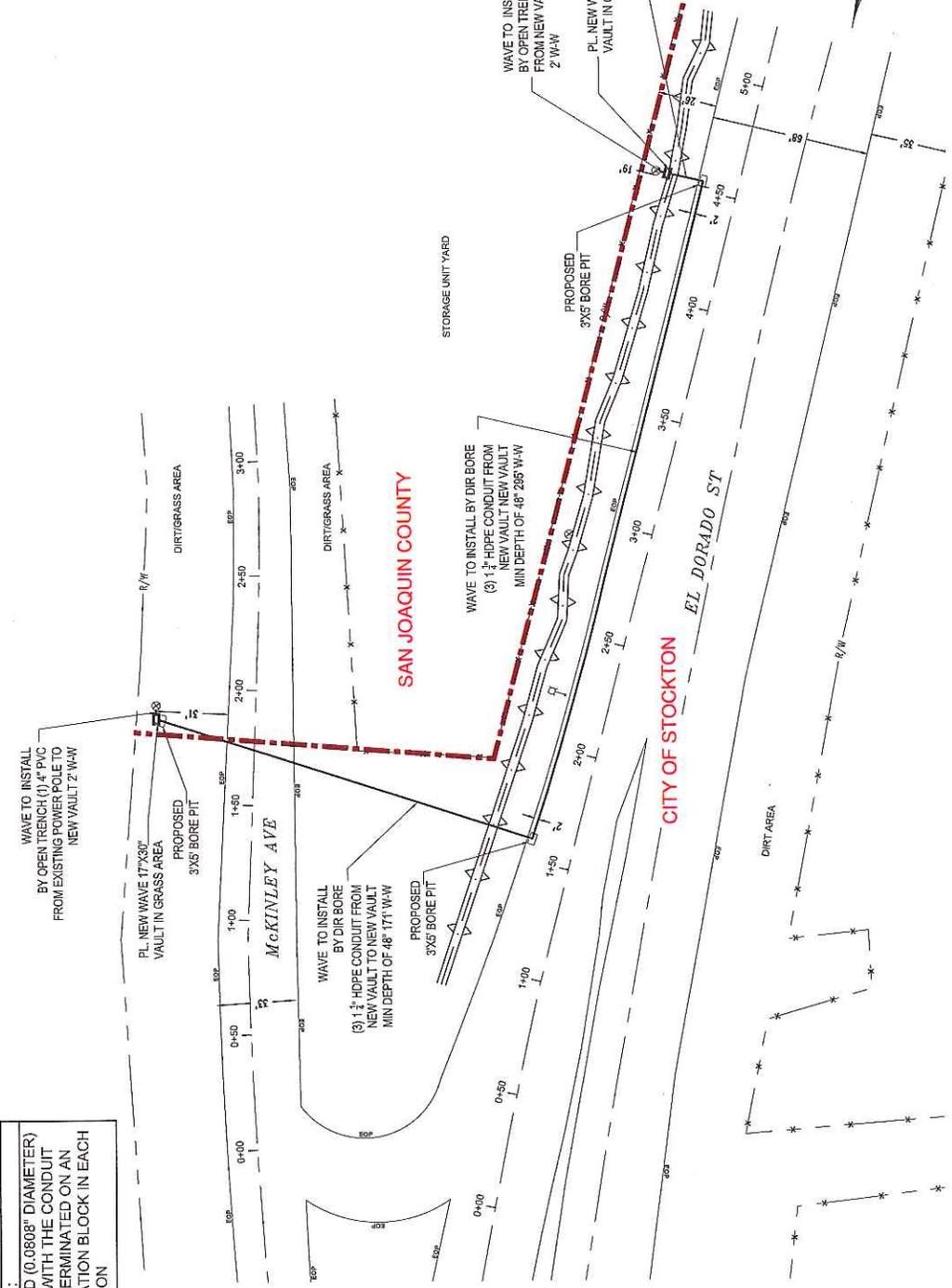
APPLICANT: **wave ASTOUND BROADBAND**

LOCATION: PROJECT #9967 EL DORADO ST AND MCKINLEY AVE UNDERGROUND CROSSING
JN#
DESIGN/ISSUED DATE: 10/20/16
FILED/ISSUED DATE: 10/20/16
SHEET 1 OF 6

CONSTRUCTION NOTE:
 PLACE A 12" AWG SOLID (0.0808" DIAMETER)
 TRACER WIRE ALONG WITH THE CONDUIT
 INSTALLATION TO BE TERMINATED ON AN
 ACCEPTABLE TERMINATION BLOCK IN EACH
 HANDHOLE/MH LOCATION

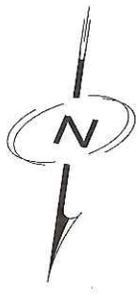
LEGEND

- WAVE FIBER UC BUILD
- PL NEW WAVE 17"x30"
- EXISTING POLE MANHOLE GAS
- EXISTING SANITARY SEWER
- EXISTING STORM DRAIN
- EXISTING ELECTRIC
- EXISTING TELEPHONE
- EXISTING RIGHT OF WAY
- EXISTING SP MANHOLE
- EXISTING SS MANHOLE
- EXISTING ATT MANHOLE
- EXISTING ELECTRIC HANDHOLE
- EXISTING ATT HANDHOLE
- EXISTING FIRE HYDRANT
- EXISTING LIGHT POLE
- EXISTING POWER POLE
- EXISTING TREE
- EXISTING WATER VALE
- EXISTING POLE



- ABBREVIATIONS:**
- G/S GAS
 - (E) EXISTING
 - MH MANHOLE
 - EDP EDGE OF PAVEMENT
 - FOC FACE OF CURB
 - SW STORM DRAIN
 - SL STREET LIGHT
 - S SANITARY SEWER
 - T TELEPHONE
 - W WATER
 - D/W DRIVEWAY

SCALE: 1" = 50'
 30' 50' 60'



LOCATION: PROJECT #9987 EL DORADO ST AND MCKINLEY AVE UNDERGROUND CROSSING
 JNH#
 DATE: 10/02/16
 DESIGN: SLE
 FIELD: REE

APPLICANT: ASTOUND BROADBAND



AGENCY/CITY: STRUCTURE LEASING & ENGINEERING INC
 RAY DELCADO
 CELL: 408-504-2486
 EMAIL: RAYDEL@DODOSLEGROUP.NET
 NIK DELCADO
 CELL: 408-866-3448
 EMAIL: NIKDEL@DODOSLEGROUP.NET

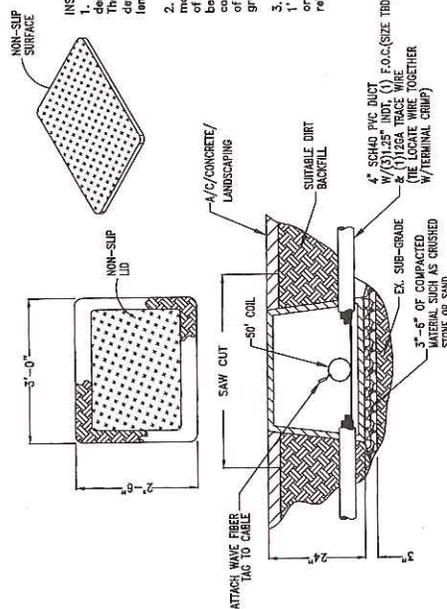
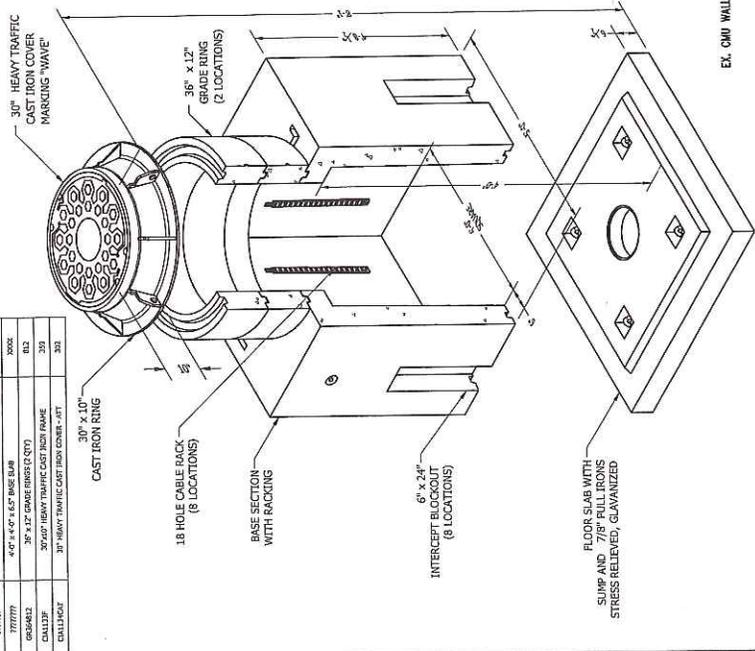


PLAN REVISIONS		
REV.	DATE	DESCRIPTION

DIGALERT
 CALL TOLL FREE
 48 HOURS BEFORE YOU DIG
 UNDERGROUND SERVICE ALERT
 (811)
 Know what's below.
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TYPICAL DETAILS

MATERIAL LIST		
PART NUM	DESCRIPTION	WEIGHT (LBS)
777777	4" x 4" x 4" x 4" W/ 1/2" BARS SECTION RACKED AND FINISHED	2000
777777	4" x 4" x 4" x 4" W/ 1/2" BARS	2000
654642	30" x 12" GRADE (RIBBED) (RTY)	600
CALL3P	30" x 12" HEAVY TRAFFIC CAST IRON COVER	250
CALL1HCF	30" HEAVY TRAFFIC CAST IRON COVER (HT)	250



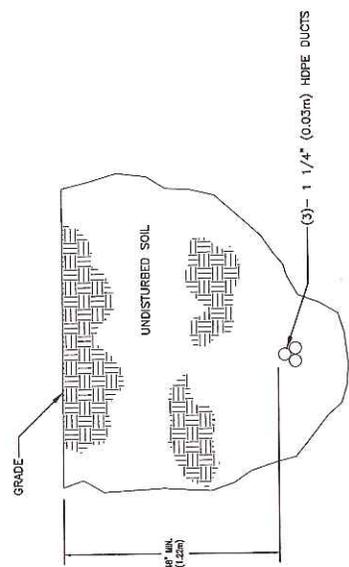
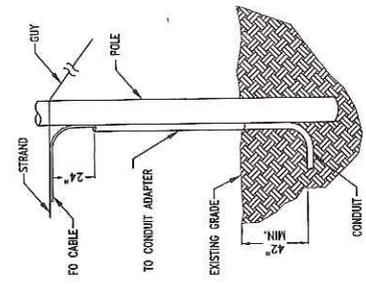
TYPICAL HANDHOLE DETAIL
3" X 2.5" X 2" HDPE (MODEL #PEM-3036)
N.T.S.

- INSTALLATION NOTES:**
1. Prepare the excavation approximately 6" deeper than the overall height of the enclosure. The length and width of the excavation should be determined by adding 4" to 6" to the overall length and width of the handhole or pull box.
 2. Place approximately 3"-6" of compacted material (stone or gravel) in the bottom of hole. Gravel fits the recommended material because of its drainage characteristics. The compacted material should be leveled so the top of the handhole or pull box is flush to the grade.
 3. Place selected backfill into the excavation at 1' lift and compact either by manual compaction or flooding the excavation to achieve the desired relative compaction. Install with cover in place.

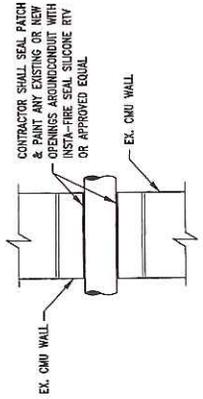
DIMENSION		
WIDTH	LENGTH	DEPTH
(6)CM	(61)CM	(6)CM

WEIGHT		
WIDTH	LENGTH	DEPTH
(6)CM	(61)CM	(6)CM

TYPICAL DIRECTIONAL
POLE ARRANGEMENT
AERIAL TO BURIED CABLE
N.T.S.



DIRECTIONAL BORE TYPICAL
N.T.S.



BLOCK WALL
PENETRATION DETAIL
N.T.S.

811
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DIGALERT
CALL TOLL FREE
48 HOURS BEFORE YOU DIG
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(811)
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PLAN REVISIONS

REV.	DATE	DESCRIPTION	BY

AGENCY/CITY: STRUCTURE LEASING & ENGINEERING INC
RAY DELGADO
CELL: 408-504-2186
EMAIL: RAYDELGADO@SLEGROUP.NET
NIK DELGADO
CELL: 408-666-3448
EMAIL: NIKDELGADO@SLEGROUP.NET

APPLICANT: wave
ASTOUND
BROADBAND

LOCATION: PROJECT #6967 EL DORADO ST AND
MCKINLEY AVE
UNDERGROUND CROSSING

JN#
DESIGN: 03/02/16
FIELD: 03/02/16

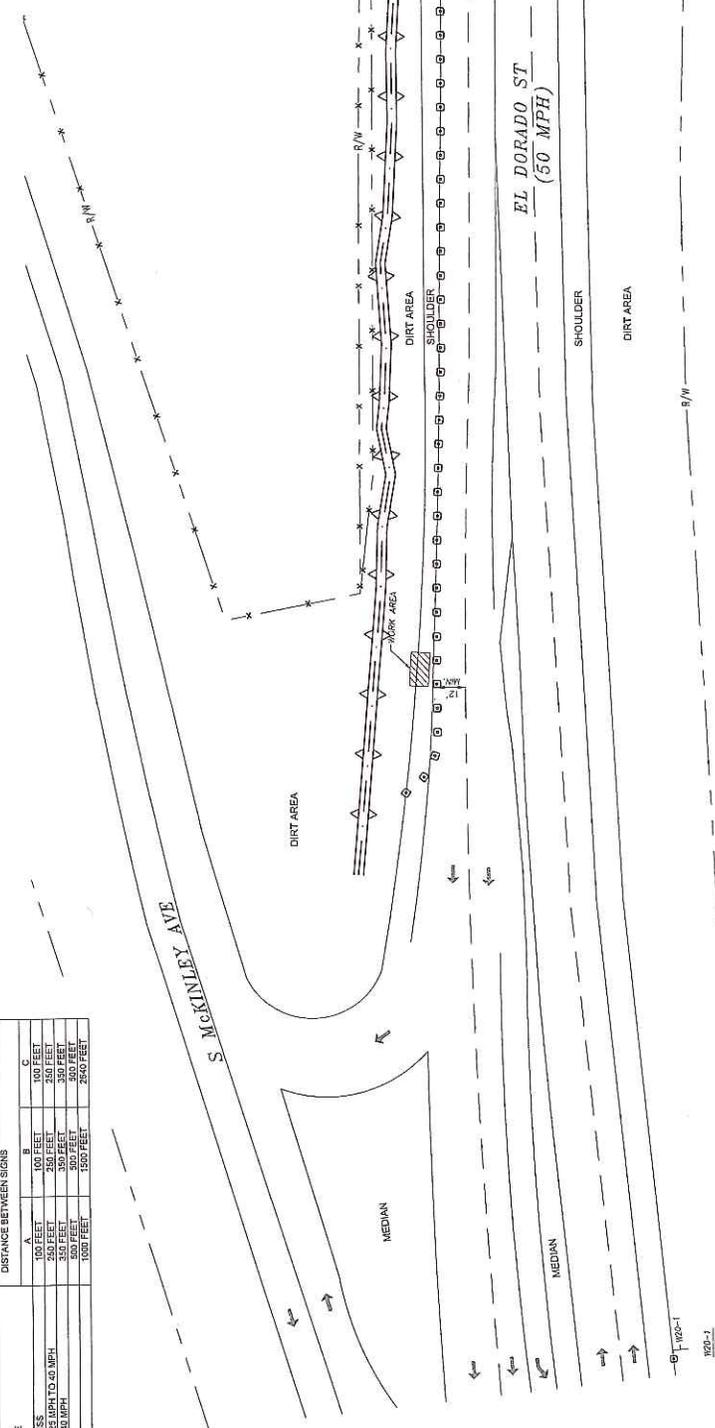
SHEET
3 OF 6

TABLE A-2
RECOMMENDED ADVANCE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS		
	A	B	C
URBAN (LOW SPEED, 25 MPH OR LESS)	100 FEET	100 FEET	100 FEET
URBAN (MID SPEED, 26 MPH TO 40 MPH)	250 FEET	250 FEET	250 FEET
URBAN (HIGH SPEED, MORE THAN 40 MPH TO 45 MPH)	350 FEET	350 FEET	350 FEET
RURAL (LOW SPEED, 25 MPH OR LESS)	100 FEET	100 FEET	250 FEET
RURAL (MID SPEED, 26 MPH TO 40 MPH)	250 FEET	250 FEET	250 FEET
RURAL (HIGH SPEED, MORE THAN 40 MPH)	350 FEET	350 FEET	250 FEET
EXPRESSWAY/FREEWAY	1000 FEET	1500 FEET	2500 FEET

REVIEWED () AS NOTED BY:
NOTE: See Table A for Sign, Cone Spacing, and Taper Lengths

DATE: 10/1/20
PROJECT INSPECTOR MAY MODIFY TRAFFIC CONTROL PLANS AS FIELD CONDITIONS DICTATE



SEE SHEET 5 STA N/A

TABLE A-3
TAPER LENGTH AND BUFFER SPACE
UBR IN TYPICAL APPLICATIONS DIAGRAMS

Speed in MPH	LENGTH OF TAPER 'L' IN FEET		STOPPING SIGHT DISTANCE AS A FUNCTION OF SPEED	
	11 Feet Offset**	12 Feet Offset**	Distance 145 FEET	Distance 155 FEET
25	115	125	30	200 FEET
30	145	155	35	200 FEET
35	180	190	40	300 FEET
40	225	245	45	300 FEET
45	295	320	50	400 FEET
50	395	430	55	400 FEET
60	605	650	60	570 FEET
65	660	720	70	700 FEET
70	770	840	75	800 FEET

NOTE TO CONTRACTOR: ALL SIDEWALK AND DRIVEWAY TAPERS ARE TO BE CONSTRUCTED AS AFFECTED. USE THE FOLLOWING SIGNS TO BLOCK AND REDIRECT FOOT TRAFFIC.

STRAK CLOSURE SIGN: 18" x 27" (STANDARD) / 79" x 114" / 30" x 27" (MIN.) / 36" x 27" (STANDARD) / 68-34

TABLE A
MINIMUM RECOMMENDED DELINEATOR AND SIGN PLACEMENT

TYPE OF TAPER	TAPER LENGTH
UPSTREAM TAPER	MINIMUM 12' L MINIMUM 12' L MINIMUM
SHIFTING TAPER	50 FEET MINIMUM
DOWNSTREAM TAPER (USE IS OPTIONAL)	100 FEET MAXIMUM

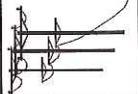
FORMULA FOR TAPER LENGTH 'L'

L = WS (40 MPH OR LESS) L = WS (45 MPH OR GREATER)
L = WS (40 MPH OR LESS) L = WS (45 MPH OR GREATER)
L = WS (40 MPH OR LESS) L = WS (45 MPH OR GREATER)
L = WS (40 MPH OR LESS) L = WS (45 MPH OR GREATER)

LOCATION: PROJECT #9987 EL DORADO ST AND MCKINLEY AVE UNDERGROUND CROSSING
JN#



AGENCY: STRUCTURE LEASING & ENGINEERING INC
RAY DELGADO
CELL: 438-504-2488
EMAIL: RAYDELGADO@SLGROUP.NET



REV	DATE	DESCRIPTION	BY

DIGALERT
CALL TOLL FREE 8 HOURS BEFORE YOU DIG UNDERGROUND AND SERVICE ALERT (811)
Know what's below. Call before you dig.



DESIGN: E.L. FIELDER/SL DATE: 10/02/16
DATE: 10/02/16

PROJECT #9987 EL DORADO ST AND MCKINLEY AVE UNDERGROUND CROSSING

RAY DELGADO
CELL: 438-504-2488
EMAIL: RAYDELGADO@SLGROUP.NET

NIK DELGADO
CELL: 438-666-3448
EMAIL: NIKDELGADO@SLGROUP.NET

DATE: 10/02/16

DATE: 10/02/16

DATE: 10/02/16

DATE: 10/02/16

REVIEWED () AS NOTED BY:

NOTE: See Table A
for Sign, Case Spacing,
and Taper Lengths

DATE: / / 20
PROJECT INSPECTOR MAY MODIFY
TRAFFIC CONTROL PLANS AS
FIELD CONDITIONS DICTATE

TABLE A-2

RECOMMENDED ADVANCE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS		
	A	B	C
URBAN (LOW SPEED) - 25 MPH OR LESS	100 FEET	100 FEET	100 FEET
URBAN (HIGH SPEED) - MORE THAN 25 MPH TO 40 MPH	200 FEET	200 FEET	350 FEET
URBAN (HIGH SPEED) - MORE THAN 40 MPH	300 FEET	300 FEET	500 FEET
EXPRESSWAY/FREEWAY	1000 FEET	1300 FEET	2400 FEET

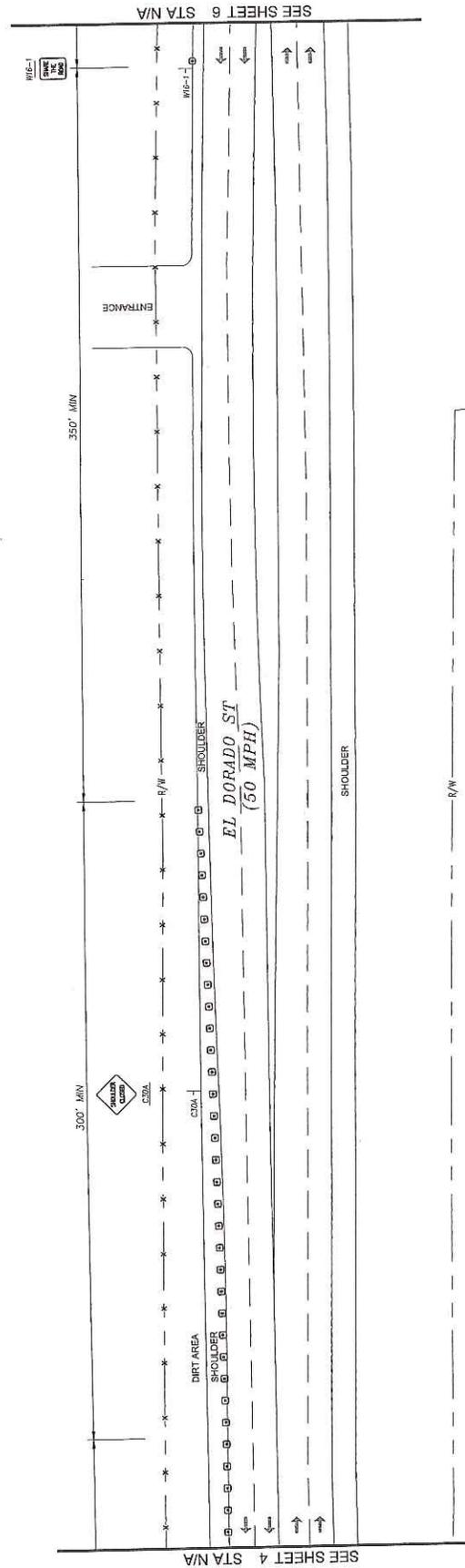


TABLE A-3

TAPER LENGTHS AND SPACING
USE IN TYPICAL APPLICATIONS DIAGRAMS

Speed in Miles per Hour*	Length of Taper 'L' in Feet		Stopping Sight Distance as a Function of Speed
	11 Feet Offset**	12 Feet Offset**	
20	75	80	20
25	115	125	25
30	155	165	30
35	200	210	35
40	240	250	40
45	285	295	45
50	330	340	50
55	380	390	55
60	430	440	60
65	480	490	65
70	530	540	70
75	580	590	75
80	630	640	80
85	680	690	85
90	730	740	90

* Peak speed of peak 85th percentile speed prior to starting, or the anticipated construction speed.
** For other offset widths, apply the formula in table A-1.

NOTE TO CONTRACTOR:
IF SIDEWALK AND/OR PEDESTRIAN TRAFFIC ARE TO BE RESTRICTED AND/OR AFFECTED, USE THE FOLLOWING SIGNS TO BLOCK AND RESTRICT PEDESTRIAN TRAFFIC.

18" x 24" (STANDARD) R9-11A
20" x 32" (MAX) J8-23B (STANDARD) R9-11B

TABLE A

MINIMUM RECOMMENDED DELINEATOR AND SIGN PLACEMENT

TYPE OF TAPER	TAPER LENGTH
URBANEAN TAPER	1 MINIMUM
MERGING TAPER	10 L MINIMUM
SHIFTING TAPER	50 FEET MINIMUM
TWO-WAY TRAFFIC TAPER	50 FEET MINIMUM
DOWNSTREAM TAPER	100 FEET MAXIMUM
(USE IS OPTIONAL)	

FORMULA FOR TAPER LENGTH 'L'

$$L = \frac{WS}{S} \text{ (40 MPH OR LESS) } + W \text{ (45 MPH OR GREATER)}$$

OR

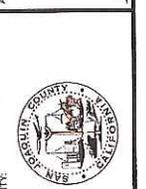
$$L = \text{TAPER LENGTH IN FEET}$$

$$W = \text{WIDTH OF OFFSET IN FEET}$$

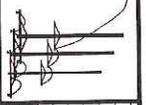
$$S = \text{SPEED IN MPH}$$

LOCATION:
PROJECT #9987 EL DORADO ST AND
MCKINLEY AVE
UNDERGROUND CROSSING

JN#
DATE: 10/09/16
DESIGNER: JN#
DATE: 10/09/16



AGENCY: SAN JOAQUIN COUNTY
STRUCTURE LEASING & ENGINEERING INC
1010 D ST
CELL: 408-504-2486
EMAIL: RAYDE.LCADO@SELEGROUP.NET
NIK DELCADO
CELL: 408-666-3448
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REV.	DATE	DESCRIPTION	BY

DIGALERT
CALL TO ALERT
48 HRS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
(811)
Know what's below.
Call before you dig.

REVIEWED (AS NOTED) BY:

NOTE: See Table A for sign, cone spacing, and taper length.

DATE: _____ / ____ / ____
 PERMIT # _____
 PROJECT INSPECTOR MAY MODIFY THIS PLAN TO REFLECT FIELD CONDITIONS DATE

TABLE A-2
 RECOMMENDED ADVANCE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS		
	A	B	C
URBAN (LOW SPEED, 25 MPH OR LESS)	100 FEET	100 FEET	100 FEET
URBAN (HIGH SPEED, MORE THAN 25 MPH TO 40 MPH)	250 FEET	250 FEET	250 FEET
RURAL (HIGH SPEED, MORE THAN 40 MPH)	350 FEET	350 FEET	350 FEET
EXPRESSWAY/FREEWAY	1000 FEET	1500 FEET	2840 FEET

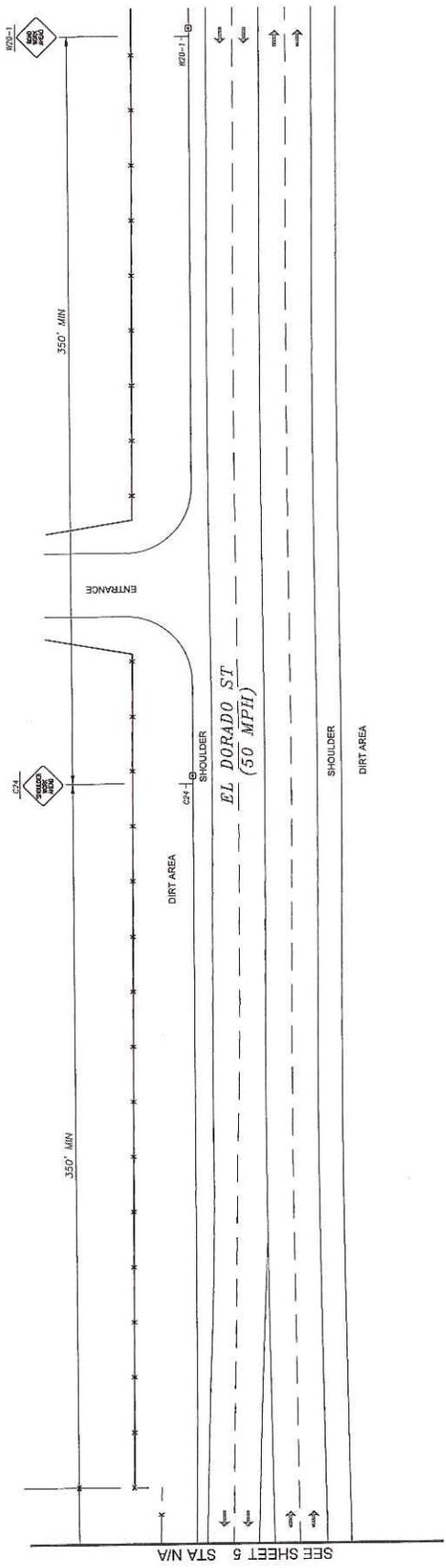


TABLE A-3
 TAPER LENGTH AND BUFFER SPACE
 USE IN TYPICAL APPLICATIONS DIAGRAMS

Speed in Miles per Hour	LENGTH OF TAPER, L, IN FEET		STOPPING SIGHT DISTANCE AS A FUNCTION OF SPEED	
	11 Feet Offset	12 Feet Offset	Distance	Speed in MPH
20	25	115	115 FEET	20
30	35	165	165 FEET	30
40	45	220	200 FEET	40
50	55	290	250 FEET	50
60	65	370	300 FEET	60
70	75	460	350 FEET	70
80	85	560	400 FEET	80
90	95	670	450 FEET	90
100	105	790	500 FEET	100

* Paved speed, off-peak 85th percentile speed prior to starting, or the anticipated operation speed.
 ** For other offset widths, apply the formula in table A-1.

NOTE TO CONTRACTOR: ANY AND ALL PREVIOUS TRAFFIC SIGNS TO BE REMOVED OR RELOCATED USE THE FOLLOWING SIGNS TO BLOCK AND REDIRECT FOOT TRAFFIC.

18" x 24" (310x640) 20" x 32" (50x80) 36" x 36" (STANDARD) 80-34

TABLE A
 MINIMUM RECOMMENDED DELINEATOR AND SIGN PLACEMENT

TYPE OF TAPER	TAPER LENGTH
UPSTREAM TAPER	MINIMUM 1/2 L MINIMUM 50 FEET MINIMUM 100 FEET MAXIMUM
SHIFTING TAPER	MINIMUM 1/2 L MINIMUM 50 FEET MINIMUM 100 FEET MAXIMUM
DOWNSTREAM TAPER	MINIMUM 1/2 L MINIMUM 50 FEET MINIMUM 100 FEET MAXIMUM
DOWNSTREAM TAPER (USE IS OPTIONAL)	MINIMUM 1/2 L MINIMUM 50 FEET MINIMUM 100 FEET MAXIMUM

FORMULA FOR TAPER LENGTH 'L'

$$L = \frac{WS^2}{60}$$

L = WS² (40 MPH OR LESS) L = WS (45 MPH OR GREATER)
 W = TAPER LENGTH IN FEET
 S = SPEED IN MPH

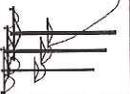
LOCATION: PROJECT #9967 EL DORADO ST AND MCKINLEY AVE UNDERGROUND CROSSING
 JN#



AGENCY: STRUCTURE LEASING & ENGINEERING INC

RAY DELCADO
 CELL: 408-504-2486
 EMAIL: RAYDELCA@SLEGROUP.NET

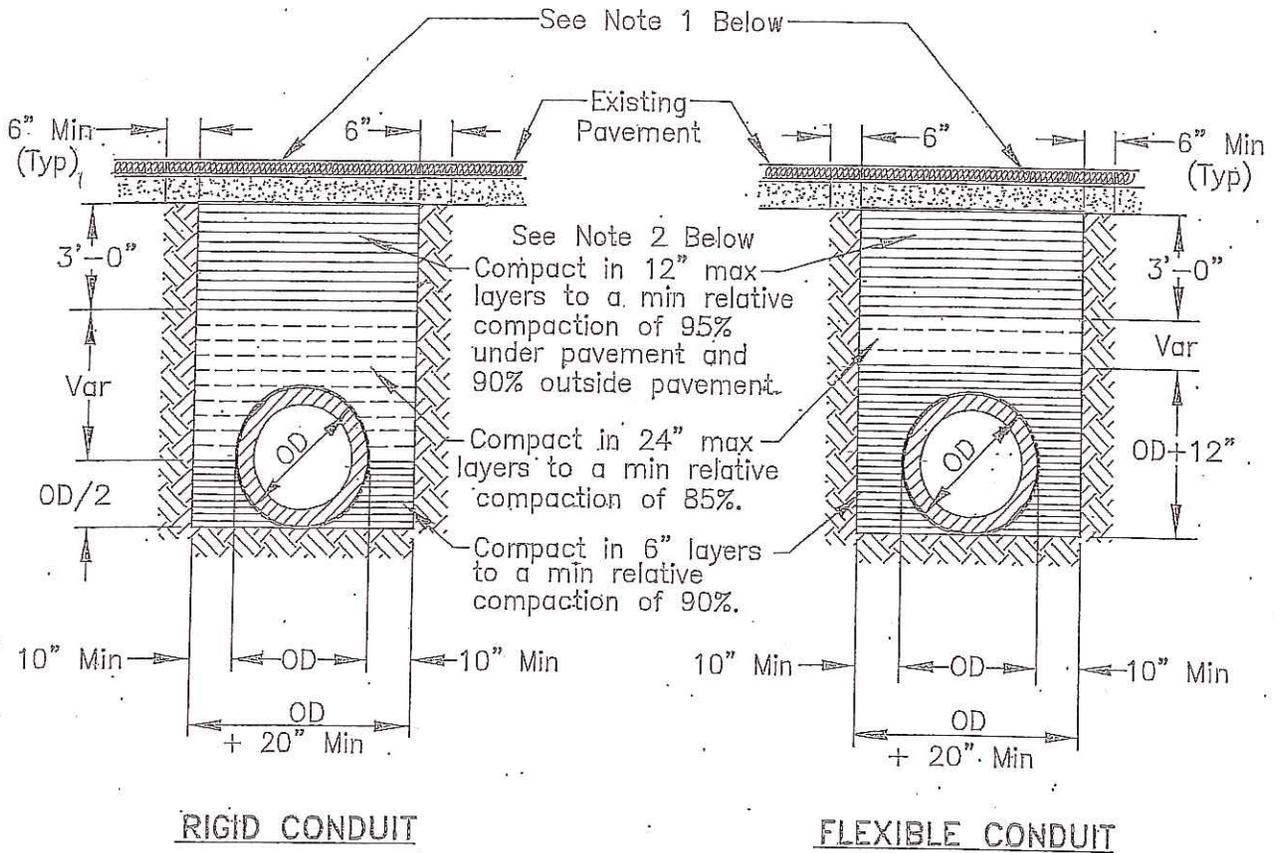
NIK DELCADO
 CELL: 408-566-3448
 EMAIL: NIKDELCA@SLEGROUP.NET



REV.	DATE	DESCRIPTION	BY

DIGALERT
 CALL TOLL FREE 1.800.48 HOURS BEFORE YOU DIG UNDERGROUND TO AVOID SERVICE ALERT (8-11)
 Know what's below. Call before you dig.

DATE: 10/20/16
 DESIGNER: JN#
 FIELDER: JN#



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.



TYPICAL TRENCH BACKFILL

COUNTY OF SAN JOAQUIN
DEPARTMENT OF PUBLIC WORKS

Approved by:

Thomas M. Gill

No.	Revision	Description	Date

Date: DEC 2014

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

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.