



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-1702396
Date Issued: 08/08/2017
Start Date: 08/08/2017
Exp. Date: 10/01/2017
Project No: PWP7110005
Quad: SE

ENCROACHMENT PERMIT

To: WAVE BROADBAND
215 MASON CIR
CONCORD, CA 94520

Encroachment Type:

Bore (up to 12 inch Dia)	Bell Hole		
--------------------------	-----------	--	--

Location:

N/S HWY 99 FRONTAGE RD E/O AUSTIN RD

In compliance with your request of 08/08/2017, 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: \$2,676.75

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

KRIS BALAJI, Director
Department of Public Works

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 6/05/2017

To: San Joaquin County
Department of Public Works

Wave Broadband

 (Applicant Name)

215 Mason Circle

 (Mailing Address)

Concord, CA, 94520

 (City, State, Zip Code)

(925) 459 1028 ext 21028

 (Area Code - Telephone Number)

OFFICE USE ONLY			
JOB #	<u>110005</u>	REF #	_____
APN	_____	CR #	_____
EXP. DATE	<u>10-1-17</u>		
VALID	<u>8-8-17</u> TO <u>10-1-17</u>	DRIVEWAYS:	_____
STREET	<u>99 Frontage</u>	*	_____
AREA	<u>Manteca</u> QUAD <u>SE</u>	*	_____
TYPE	<u>Bore</u>	*	_____
FORMS	<u>SSWH/R29</u>		
NOTES	_____		

Sketch (Detailed plans may be submitted)
 Please see attached construction permit drawing
 This Permit request is to revise the original permit PS-1603467
 9980- SC07001A-UG- 99 Frontage Rd

The undersigned hereby applies for permission to excavate, construct and/or otherwise encroach on County Highway Right-of-Way on the North side of 99 Frontage Rd approximately 4,670 feet/mile mile of Austin Rd, starting from Austin Blvd, by performing the following work (description of work):

Trench or Bore 4.670' (1) 4" Conduit

This Permit request is to revise the original permit PS-1603467 with an extension of the bore 1600 ft South 99 Frontage Rd

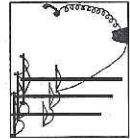
Work will commence on or about ASAP for approximately 30 days.

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.


 Signature of Applicant - Title

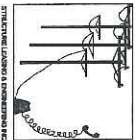
6/05/2017

Date

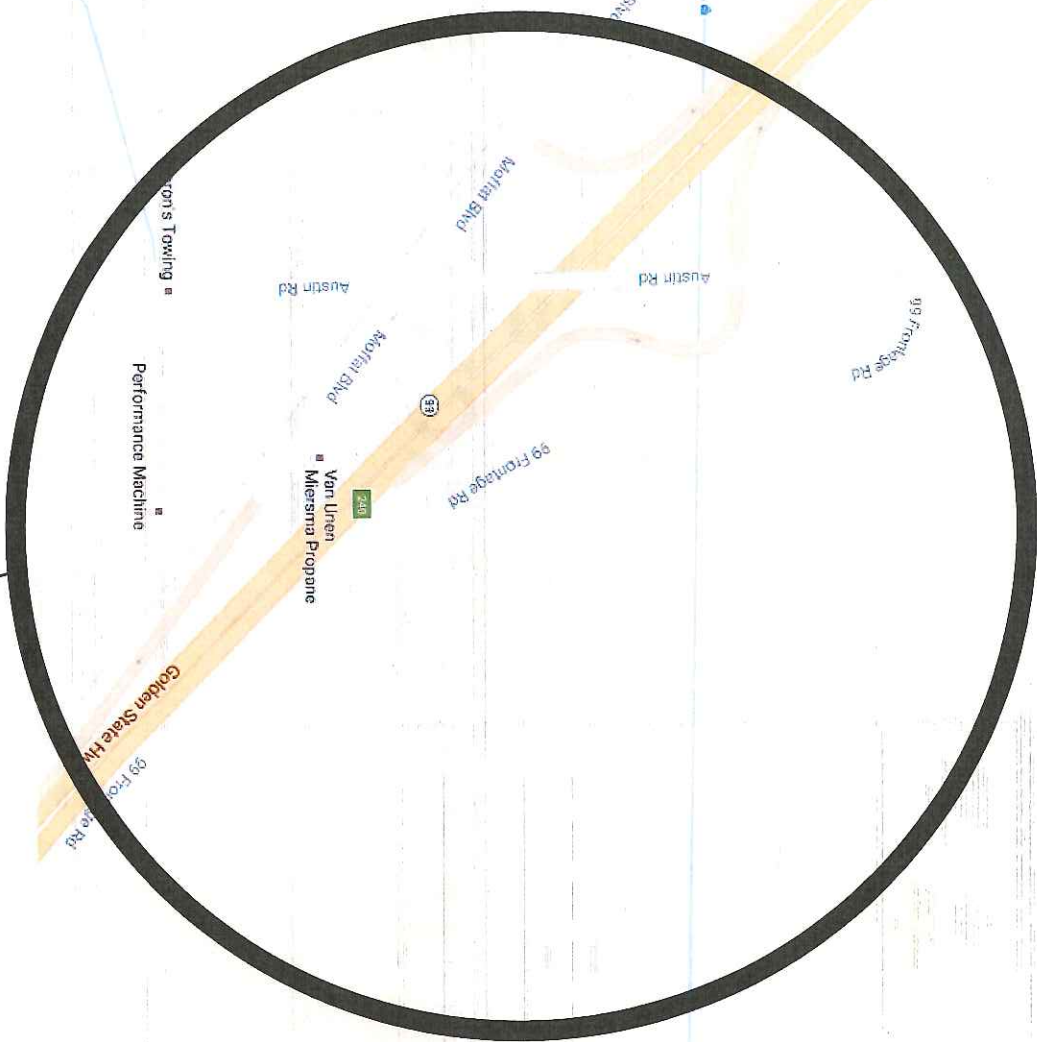


SC07001A - UNDERGROUND FIBER 3-UG

 MADE IN THE U.S.A. estabond. ENVIRONMENTAL AND OCCUPATIONAL PROTECTION	WAVE 2 1/2" ALUMINUM CIRCLES FOR IDENTIFICATION	SCALE _____ N.T.S.	FILE NAME: 90278014 (3-10)
		COVER	
DRAFTED BY: _____ DATE: 05/29/17	LOCATION: MANTECA CALIFORNIA	REFERENCE AND NUMBER: _____	OF 29



WORK LOCATION



stantec STANTEC LIVING & ENVIRONMENT INC.		WAVE WAVE CONSULTING GROUP		SCALE 1" = 1 MILE	FILE NAME 20200816-01
LOCATION MANTECA CALIFORNIA		WORK LOCATION MAP		DATE/REV/17 2020/08/17	
PROJECT NO. 2020		REFERENCE MAP NUMBER 2 OF 29			

CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL CONTACT THE ADJACENT PROPERTY OWNERS A MINIMUM OF 10 DAYS IN ADVANCE AND AGAIN 2 DAYS IN ADVANCE OF CONSTRUCTION AT THE WORK SITE.
2. ALL TRAFFIC CONTROL DEVICES SHALL BE IN PLACE BEFORE WORK IS STARTED. DEVICES NO LONGER REQUIRED SHALL BE REMOVED AS SOON AS POSSIBLE.
3. PEDESTRIAN TRAFFIC MUST BE MAINTAINED AT ALL TIMES. PEDESTRIANS MAY BE RELOCATED ONTO PRIVATE PROPERTY WITH OWNERS PERMISSION ONLY.
4. NO EQUIPMENT OR MATERIALS SHALL BE STORED OR PERMITTED TO STAND UNPROTECTED WHERE TRAFFIC IS MAINTAINED UNLESS IT IS ALLOWED BY CITY TRAFFIC ENGINEERING IN WRITING.
5. NO EQUIPMENT OR MATERIALS SHALL BE STORED ON ROAD SURFACE DURING NON-WORKING PERIODS UNLESS IT IS ALLOWED BY CITY TRAFFIC ENGINEER IN WRITING.
6. NO EQUIPMENT OR MATERIALS SHALL BE STORED ON SIDEWALK UNLESS IT IS ALLOWED BY CITY ENGINEER.
7. EXCAVATION MATERIALS SHALL BE STORED AWAY FROM THE PAVED ROADWAY WHEREVER POSSIBLE. SPILLED MATERIAL SHALL BE REMOVED TO AVOID SLIPPERY CONDITIONS.
8. EXISTING SIGNS, DELINEATION'S, GUARDRAILS, MARKERS, TREES, SHRUBS, FENCES, WALKS, STOPS, ETC. THAT ARE DISTURBED BY THE CONSTRUCTION SHALL BE REPLACED OR RESTORED TO THEIR ORIGINAL CONDITION.
9. CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES IN AREA OF WORK PRIOR TO CONSTRUCTION. CALL UNDERGROUND SERVICE ALERT (USA, 1-800-222-2600) AND ALL OTHER UTILITY COMPANIES AT LEAST 2 WORKDAYS PRIOR TO CONSTRUCTION (EXCEPT MONDAY 14 CALENDAR DAYS).
10. CONTRACTOR SHALL HAND DIG AND USE EXTREME CARE UTILITIES.
11. TRAFFIC SIGNAL DETECTOR LOOP CIRCUITS ARE NOT SHOWN. CONTRACTOR SHALL LOCATE ALL TRAFFIC SIGNAL DETECTOR LOOP CIRCUITS PRIOR TO ANY TRENCHING OR BORING. ALL TRAFFIC LOOP DETECTOR CIRCUITS SHALL BE MAINTAINED AND PROTECTED FOR A MINIMUM OF 48 HOURS PRIOR TO ANY WORK IN THESE AREAS.
12. TRENCH TO PLACE
(1) 4" CONDUIT
12A. BORE TO PLACE
(1) 4" CONDUIT

GENERAL NOTES

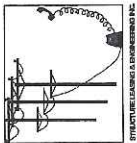
1. THE LOCATIONS AND SAFE CROSSINGS OF ALL FOREIGN UTILITIES IS THE SUBCONTRACTOR'S RESPONSIBILITY.
2. ALL WORK SHALL COMPLY WITH APPLICABLE LOCAL AND REGULATORY AGENCIES INCLUDING, BUT NOT LIMITED TO, OSHA, ETC. GENERAL NOTES SHALL APPLY TO ALL DRAWINGS.
3. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS. SOME EXISTING UTILITIES MAY NOT BE DEPICTED ON THIS PLAN.
4. PREFERRED METHOD OF CONSTRUCTION WILL BE DIRECTIONAL BORING. SOME TRENCHING MAY BE REQUIRED IN SPECIFIED LOCATIONS.
5. IT WILL BE THE RESPONSIBILITY OF THE SUBCONTRACTOR TO MAINTAIN ALL AS-BUILT DRAWINGS AND PREPARE COMPLETE SET OF DRAWINGS TO WAVE WITHIN 14 DAYS OF WORK COMPLETION.
6. APPROXIMATE LOCATIONS OF WAVE SPUR BOXES ARE SHOWN ON THE PLANS. EXACT FINAL LOCATION OF SPUR BOXES SHALL BE DETERMINED IN THE FIELD AFTER ALL EXISTING UTILITIES IN THE AREA OF WORK HAVE BEEN LOCATED. COORDINATE FINAL SPUR BOX LOCATIONS WITH WAVE.
7. DEPTHS OF EXISTING UTILITIES SHOWN ON PLANS ARE APPROXIMATE AND WILL BE VERIFIED IN FIELD PRIOR TO CONSTRUCTION.

CONTACT LIST

NAME	PHONE #	EMAIL
CITY OF MANTECA ENGINEERING	(209) 458-8422	AMJANGO@CI.MANTECA.CA.US
WAVE BROADBAND	(925) 459-1174	AROSSETTI@WAVEBROADBAND.COM
STURCTURE LEASING AND ENGINEERING, INC.	(408) 504-2466	RAYDELGADO@SLEGROUP.NET
SSJD	(209) 249-4620	FRILLINGSWORTH@SSJD.COM
SSJD	(209) 249-4616 W: (209) 952-2987	JERRY DONAHUE INSPECTOR
MANDATORY PRE CONSTRUCTION MEETING REQUIRED WITH SSJD INSPECTOR		

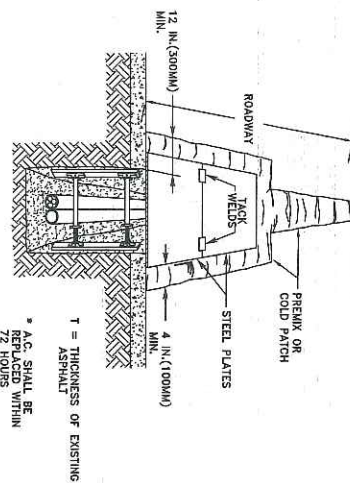
SAFETY

1. THE CONTRACTOR IS RESPONSIBLE FOR JOB-SITE SAFETY AND SHALL BE RESPONSIBLE FOR ALL LIABILITY IMPOSED BY THE LAW OR PERSONAL INJURY OR PROPERTY DAMAGE TO THE PUBLIC OR PERSONS OR DAMAGE TO THE ENCROACHMENT PERMIT OR WHICH MAY ARISE OUT OF THE SAFETY FAILURE ON THE PART OF THE PERMITEE TO PERFORM HIS OBLIGATIONS UNDER THIS PERMIT IN RESPECT TO MAINTENANCE OF THE ENCROACHMENT.
2. ALL TRAFFIC CONTROL SHALL CONFORM TO THE CURRENT CALIFORNIA DEPARTMENT OF TRANSPORTATION ("MANUAL OF TRAFFIC CONTROL") FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS ("COMBINATION OF TRAFFIC CONTROL AND DEVICES FOR USE IN PERFORMANCE OF WORK UPON HIGHWAYS").
3. ALL EXCAVATIONS SHALL CONFORM TO THE REQUIREMENT OF THE STATE OF CALIFORNIA DIVISION OF OCCUPATIONAL SAFETY AND HEALTH. THE PERMITEE MUST BE PERMITTED TO A "PERMIT TO WORK" FOR THE PROJECT WITHIN THE DIVISION OF INDUSTRIAL SAFETY, DEPARTMENT OF INDUSTRIAL RELATIONS, STATE OF CALIFORNIA.
4. CONTRACTOR SHALL FURNISH AND MAINTAIN ALL DEVICES FOR PEDESTRIAN AND VEHICULAR TRAFFIC SAFETY. UNSAFE CONDITIONS WILL BE CORRECTED BY CITY PERSONNEL (OR AGENTS THEREOF) AND THE PERMITEE WILL BE BILLED FOR ALL EXPENSE INCURRED, OR COSTS SHALL BE RECOVERED FROM CASH DEPOSITS HELD FOR SUCH PURPOSES.



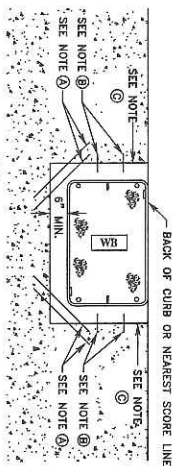
		WAVE 214 WATSON CIRCLE PLEASANTON, CA 94566-1000 PHONE: (925) 459-1174 FAX: (925) 459-1175	SCALE: N.E.L.	FILE NAME: 50770112 (E-US)
LOCATION: MANTECA CALIFORNIA		CONSTRUCTION NOTES		3 OF 29
DRAFTED BY: DATE:	DATE: 9/29/17	DRAWING NUMBER:	3 OF 29	

NOTE
TRENCH WALLS AND ADJACENT
SOILS SHALL BE SUFFICIENTLY
STABLE FOR THE ABOVE PLATE.



WIDTH OF TRENCH	MINIMUM THICKNESS OF STEEL PLATE
1.0 FEET	1/2 INCH
1.5 FEET	3/4 INCH
2.0 FEET	7/8 INCH
3.0 FEET	1 INCH
4.0 FEET	1-1/4 INCH

1 PLATE BRIDGING DETAIL N.T.S.



- NOTE:
- ① PLACE 2 #4 REBAR AT CORNERS.
 - ② PLACE #4 REBAR DOWELS AT 2' INTERVALS INTO EXISTING CONCRETE.
 - ③ SAWCUT CONCRETE AT NEAREST SCORE LINE.

2 TYPICAL CONCRETE REPLACEMENT DETAIL N.T.S.

FCAT73030T-00006 FIBERGLASS/POLYMER CONCRETE ASSEMBLY

17' X 30' X 30"
(for actual dimensions see drawing)
Fiberglass / Polymer Concrete Assembly,
Tapered Sides, No Floor, W/LC 3.6,
ANSI/SCSTE 77-7T1520K, 38" Hex
Eds, Standard Nomenclature (Specify at
line of order) installed

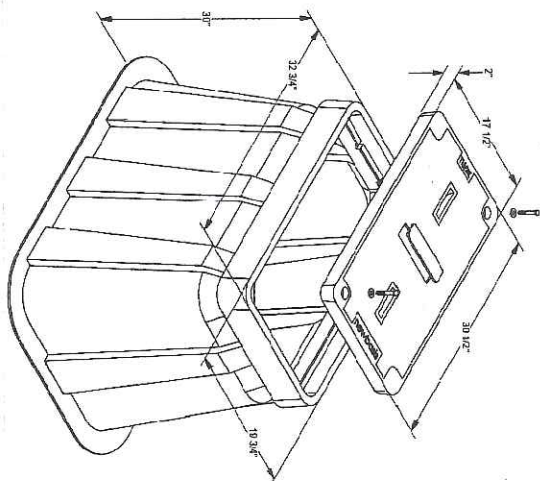
LOAD RATINGS
Incidental Traffic - Parking Lot, Sidewalk
Conforms to:
• ASTM C 957
• ANSI/SCSTE 77
• ANSI/SCSTE 77

- FEATURES:**
- Durable, chemical resistant polymer concrete
 - Durable, chemical resistant polymer concrete
 - Shipped assembled
 - Slip resistant cover
 - Integral drain holes
 - Cast in place or precast
 - Integral drain holes

Additional product information
continued on the reverse

newbasis
Composites for Infrastructure
2500 Redwood Avenue
San Jose, CA 95131
951.717.0000
951.717.0002 (fax)
info@newbasis.com
newbasis.com

Inside Dimensions		
Length	Width	Depth
28 5/8"	15 5/8"	28"
37 3/8"	24 3/8"	

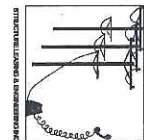


Rev A.1



- NOTE:
- ① CONTRACTOR SHALL SAWCUT AT NEAREST SCORE LINE.
 - ② CONTRACTOR SHALL MATCH ALL COLORS AND FINISH TYPES OF ALL CONCRETE REMOVED OR DISTURBED DURING CONSTRUCTION.

3 TYPICAL CONCRETE RESTORATION PLAN N.T.S.



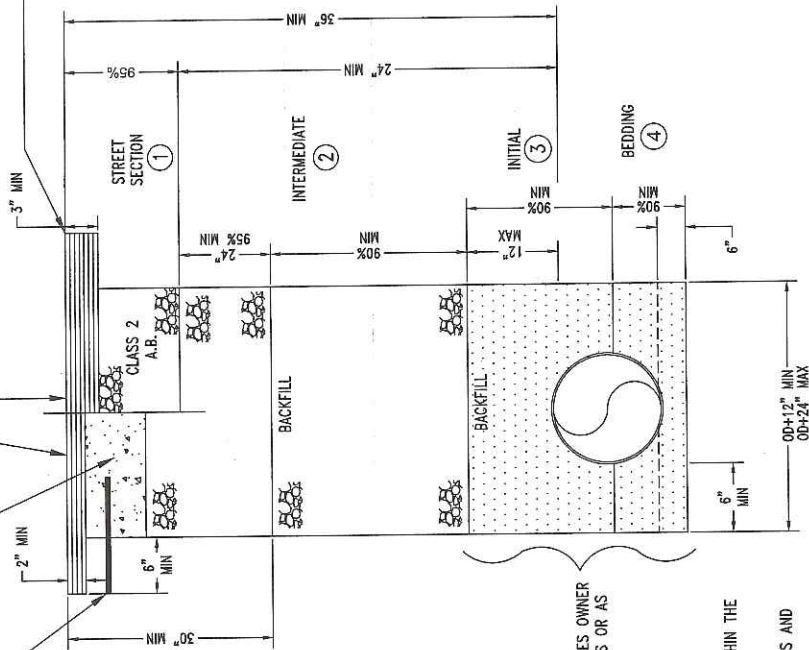
AGGREGATE BASE SHALL BE CLASS 2, AND THE COMBINED AGGREGATE SHALL CONFORM TO THE 3/4" MAXIMUM GRADINGS SPECIFIED IN SECTION 26-1.02B, "CLASS 2 AGGREGATE BASE". AGGREGATE BASE SHALL NOT BE PLACED UNTIL THE SUBGRADE HAS BEEN APPROVED BY THE ENGINEER. THE AGGREGATE GRADING OF THE VARIOUS TYPES OF ASPHALT CONCRETE SHALL CONFORM TO THE FOLLOWING:

SURFACE COURSE . . . TYPE B---1 1/2" MAXIMUM, MEDIUM
 EXCEPT FOR AGGREGATE FOR OPEN GRADED ASPHALT CONCRETE, IN ADDITION TO THE AGGREGATE REQUIREMENTS LISTED IN SECTION 39, "ASPHALT CONCRETE", OF THE STANDARD SPECIFICATIONS, THE COMBINED AGGREGATES SHALL CONFORM TO THE FOLLOWING QUALITY REQUIREMENT WHEN MIXED WITH PAVING ASPHALT GRADE AR-4000 IN THE AMOUNT OF ASPHALT DETERMINED TO BE OPTIMUM BY CALIFORNIA TEST 367:

P.C. CONCRETE, CLASS A
 (PER CALTRANS STANDARD SPECIFICATIONS) OR FULL-
 DEPTH A.C.

DOWEL WITH #4 BARS INTO EXISTING CONCRETE
 PAVEMENT OR GUTTERS

SAWCUT FULL THICKNESS OF EXISTING A.C. OR, IF THICKNESS IS GREATER THAN 4 INCHES
 GRIND EXISTING A.C. TO 1 INCH DEPTH



MATERIALS AND DIMENSIONS PER UTILITIES OWNER
 AND PIPE MANUFACTURER REQUIREMENTS OR AS
 CONTAINED IN SPECIFICATIONS

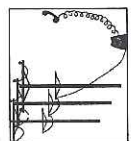
NOTES:

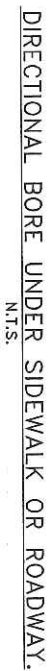
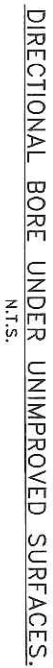
1. A STREET ENCROACHMENT PERMIT WILL BE REQUIRED FOR ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
2. ALL WORK TO BE DONE IN ACCORDANCE WITH PUBLIC AGENCY STANDARDS AND SPECIFICATIONS.
3. UNDERGROUND SERVICE ALERT (U.S.A.) SHALL BE NOTIFIED PRIOR TO BEGINNING WORK.
4. ALL EXCAVATIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY.

- ① THE STREET STRUCTURAL SECTION SHALL BE A MINIMUM OF 3" A.C. ON 12" A.B. OR SHALL MATCH EXISTING PAVEMENT SECTION PLUS 1" OF A.C. WHICHEVER IS GREATER. CONCRETE CAP OR FULL DEPTH A.C. TO BE USED AS DIRECTED BY PUBLIC AGENCY.
- ② AND ③ CALTRANS CL-2 AGGREGATE BASE. OTHER MATERIAL CAN BE USED ONLY WHEN APPROVED BY PUBLIC AGENCY.
- ④ CALTRANS CLASS 1, TYPE A PERMEABLE MATERIAL OR CALTRANS CLASS 2 A.B.

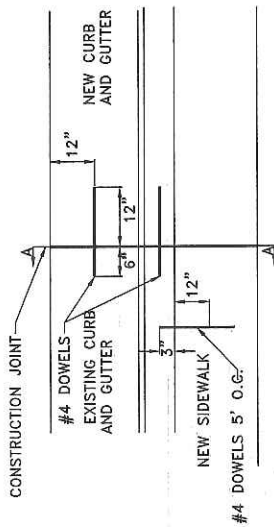
TYPICAL DETAILS

	WAVE 2040000, CA 24855 PROJECT AND CONTRACT INFORMATION	FILE NAME 2027000A (2-10)
	LOCATION MANTECA CALIFORNIA	SCALE N.T.S.
DATE: 6/26/17 DRAFTER: JC APPROVER:	DATE: 6/26/17 REFERENCE MAP NUMBER:	TYPICAL DETAILS 5 OF 29

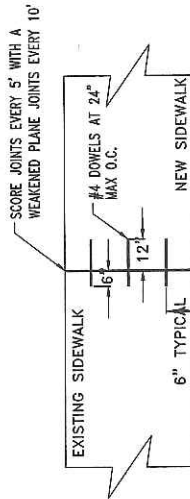




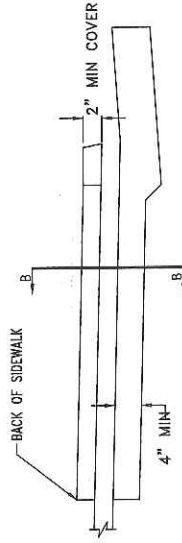
 WAVE WAVEFORM SOFTWARE	LOCATION:	SOIL:	FILE NAME:
	PROJECT NAME AND DESCRIPTION, INFORMATION	SLOTTED, CA 94500	N/A
TYPICAL DETAILS			
DATE:	RETRIEVED MAP NUMBER:	7 OF 29	



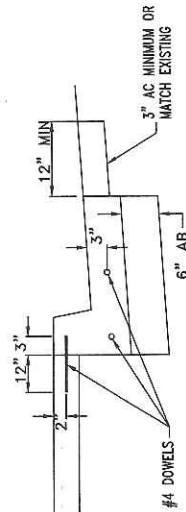
NEW CURB AND GUTTER



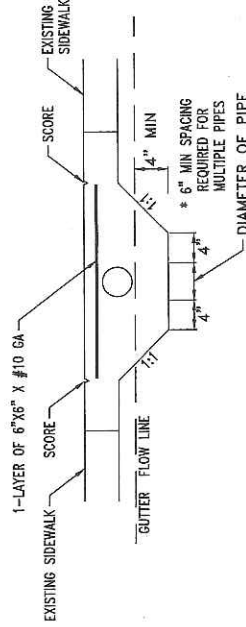
SIDEWALK PLAN VIEW



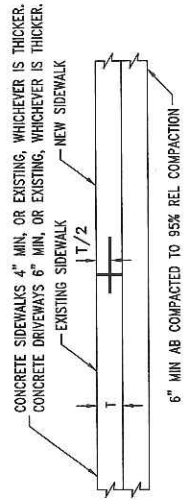
SIDEWALK UNDERDRAIN



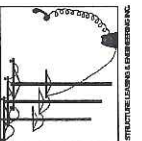
SECTION A-A



SECTION B-B



SIDEWALK ELEVATION VIEW



WAVE 215 MASON CIRCLE SAN ANTONIO, TEXAS 78204 (512) 343-1111 WWW.WAVEENGINEERING.COM	SCALE: N.T.S.	FILE NAME: 920703A (3-10)
	LOCATION: MANTECA CALIFORNIA	CITY TYPICALS DATE: 6/29/17 APPROVED:

LEGEND - SYMBOLS - ABBREVIATIONS

SYMBOLS

FIRE HYDRANT	⊗
CITY SURVEY MONUMENT	⊠
GAS METER	⊠
GAS VALVE	⊠
REGULAR FLAT GRAVE INLET	⊠
SEWER MANHOLE	⊠
SANITARY (STORM) SEWER MANHOLE	⊠
STORM MANHOLE	⊠
STREET SIGN	⊠
WATER METER	⊠
GAS LINE	— 6 — 8 —
WATER LINE	— W — W —
TELEPHONE FACILITIES	— T — T —
STORM DRAIN	— SD — SD —
SANITARY SEWER LINE	— SS — SS —
JOINT TRENCH	— JT — JT —
CENTER LINE	— C — C —
FENCE LINE	— X — X —
RAILROAD TRACKS	— + + + + + —
TOE OF SLOPE	— A A A A A —
TOP OF SLOPE	— A A A A A —

SYMBOLS

WAVE HANDHOLE	⊠
WAVE MANHOLE	⊠
POWER VAULT	⊠
R/R CROSSING GATE	⊠
R/R CROSSING SIGNAL	⊠
SIGNAL CONTROLLER	⊠
STREET LIGHT POLE	⊠
TELEPHONE VAULT	⊠
TRAFFIC SIGNAL POLE	⊠
TRAFFIC SIGNAL POLE W/LUMINAIRE	⊠
UTILITY BOX, SERVICE HANDHOLE	⊠
UTILITY POLE	⊠
WARNING SIGN	⊠
GUARD RAIL	⊠
WAVE RUNNING LINE	⊠
FACE OF CURB	⊠
POWER LINE	⊠
RIGHT OF WAY	⊠
P.U.E. LINE	⊠
STREET LIGHT	⊠
CULVERT	⊠
BRIDGE	⊠

SYMBOLS

BENCH	⊠
CABLE TV LINE	⊠
CAL TRANS MANHOLE	⊠
CCCCD MANHOLE	⊠
CLEAN OUT	⊠
ELECTRICAL BOX	⊠
ELECTRICAL VAULT	⊠
ELECTRICAL HANDHOLE	⊠
GAS MARKER	⊠
GAS VAULT	⊠
GAS VENT	⊠
HIGH VOLTAGE POWER POLE	⊠
JOINT POLE	⊠
MILE MARKER	⊠
AT&T HANDHOLE	⊠
AT&T MANHOLE	⊠
AT&T MARKER	⊠
AT&T VAULT	⊠
PG&E HANDHOLE	⊠
PG&E MANHOLE	⊠
PG&E POWER VAULT	⊠
PEDESTRIAN CROSSING SIGN	⊠

SYMBOLS

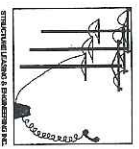
PETROLEUM LINE MARKER	⊠
PETROLEUM VENT	⊠
POWER METER	⊠
POWER POLE	⊠
ROUTE MARKER	⊠
SANITARY SEWER CLEANOUT	⊠
STOP SIGN	⊠
STREET LIGHT HANDHOLE	⊠
SURVEY POINT	⊠
TELEPHONE POLE	⊠
TELEPHONE PEDESTAL	⊠
TRAFFIC SIGNAL HANDHOLE	⊠
TREE	⊠
WATER LINE MARKER	⊠
WATER MANHOLE	⊠
WATER STAND PIPE	⊠
WATER VALVE	⊠
WATER VAULT/HANDHOLE	⊠

ABBREVIATIONS

BEG	= BEGIN
BIP	= BLACK IRON PIPE
BOC	= BACK OF CURB
BSTOP	= BUS STOP
CATV	= CABLE TV LINE
CCCCD	= CONTRA COSTA CO. SANITARY DRAIN
CO	= COUNTY
CONC	= CONCRETE
C/L	= CENTER LINE
EOA	= EDGE OF ASPHALT
EOG	= EDGE OF GRAVEL
EOP	= EDGE OF PAVEMENT
EW	= EDGE OF WATER
FOC	= FACE OF CURB
F/L	= FENCE LINE
F/H	= FIRE HYDRANT
G	= GAS LINE
GIP	= GALVANIZED IRON PIPE
GM	= GAS METER
GV	= GAS VALVE
GVault	= GAS VAULT
G/R	= GUARD RAIL
HH	= HANDHOLE
HVPP	= HIGH VOLTAGE POWER POLE
ID	= INSIDE DIAMETER
LT	= LEFT
MH	= MANHOLE
MKR	= MARKER
PCS	= PEDESTRIAN CROSS SIGNAL
QL	= QUAD LOCK

ABBREVIATIONS

PB	= POWER BOX
PP	= POWER POLE
PI	= POINT OF INVERSION
PV	= POWER VAULT
R/R	= RAILROAD
RT	= RIGHT
R/L	= RUNNING LINE
R/W	= RIGHT OF WAY
SSCO	= SANITARY SEWER CLEANOUT
SSICO	= SS INLET AND CLEANOUT
SLH	= STREET LIGHT HANDHOLE
SL	= STREET LIGHT POLE
SD	= STORM DRAIN MANHOLE
DI	= STORM DRAIN INLET
TPED	= TELEPHONE PEDESTAL
TSCB	= TELEPHONE SIGNAL CONTROL BOX
TSBH	= TELEPHONE SIGNAL HANDHOLE
TSP	= TELEPHONE SIGNAL POLE
TSPPD	= TS PEDESTAL/ POWER METER
TYAULT	= TELEPHONE VAULT
GA	= UTILITY POLE ANCHOR, GUY
XNG	= CROSSING
SW	= SIDEWALK
W	= WATER
WM	= WATER METER
WMH	= WATER MANHOLE
WV	= WATER VALVE
WVT	= WATER VAULT
WHH	= WATER HANDHOLE





PAGE 18

PAGE 17

PAGE 16

PAGE 15

PAGE 14

PAGE 13

PAGE 12

PAGE 11

PAGE 10

ASSEMBLY MAP

S AUSTIN RD

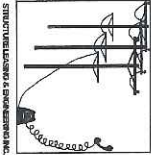
99 FRONTAGE RD



TOTAL CONSTRUCTION FOOTAGE
4815'

TOTAL CONDUIT FOOTAGE
1" - 4" = 4815'

 astound WAVE 215 WILSON AVE MANTENCA, CA 94027 PROPERTY AND CONSTRUCTION INFORMATION	SCALE N.T.S.	FILE NAME 007001A (3-10)
	LOCATION MANTENCA CALIFORNIA	
DATE/0/29/17 APPROVED	REFERENCE MAP NUMBER	9 OF 29



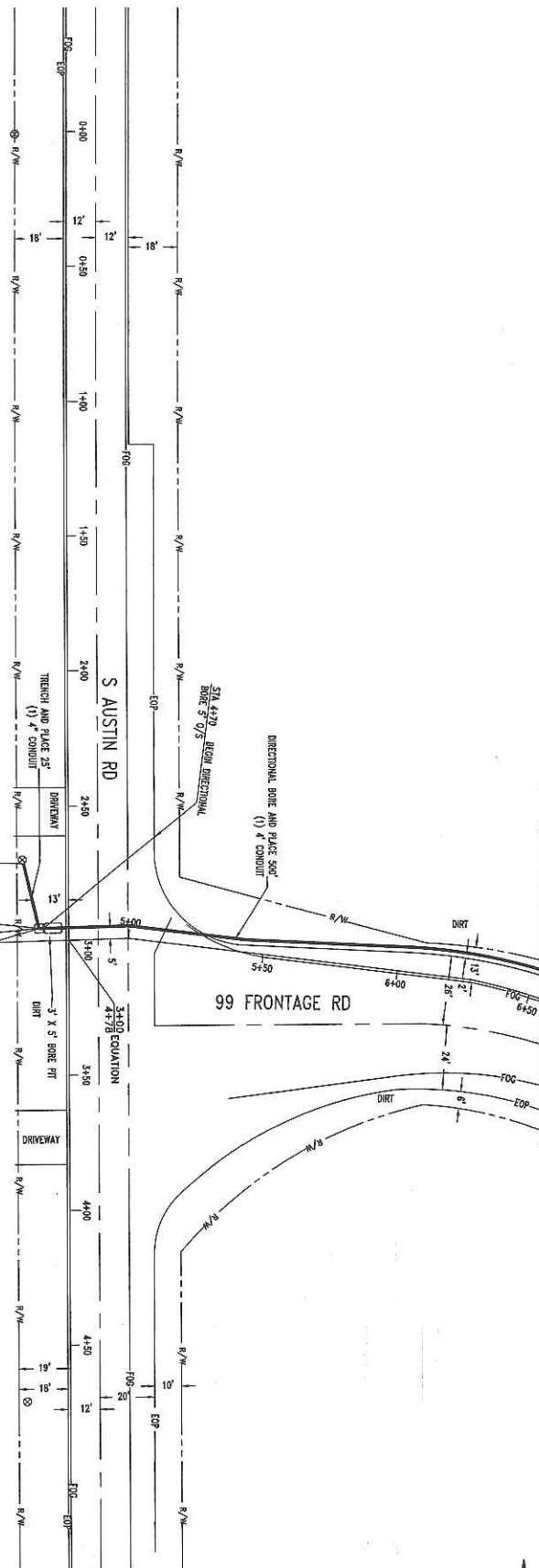
STA 0+00 JOINT POLE
19' 0/S

STA 2+43 EDGE OF
DRIVEWAY 1' 0/S
STA 2+61 EDGE OF
DRIVEWAY 1' 0/S

STA 2+70 JOINT POLE
17' 0/S
STA 2+70 BEGIN TRENCH
17' 0/S

STA 2+85 END TRENCH
8' 0/S
STA 2+85 PLACE (N)
17' X 30' HH 8' 0/S
STA 2+85 R/L CHANGE
8' 0/S

STA 3+83 EDGE OF
DRIVEWAY 1' 0/S
STA 3+83 EDGE OF
DRIVEWAY 1' 0/S



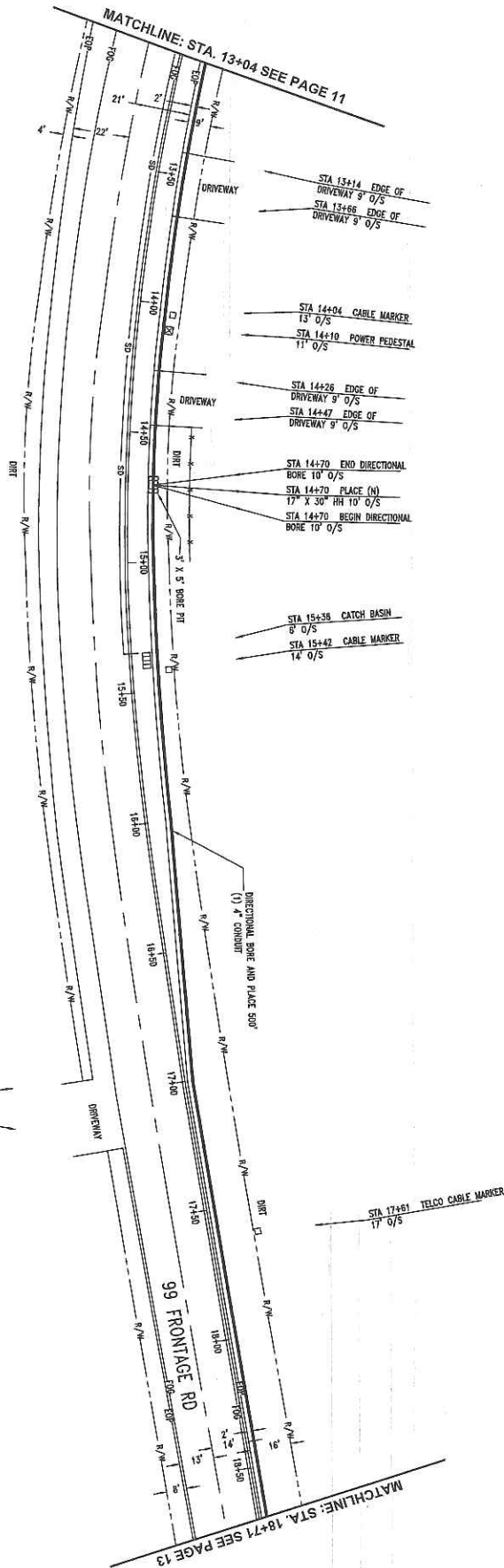
MATCHLINE: STA. 6+55 SEE PAGE 11



Know what's below.
Call before you dig.

811/800-227-2600

811	WAVE MANITECTA CALIFORNIA
DATE: 6/29/17	CONSTRUCTION PLANS
PROJECT NO. 10 OF 29	DATE: 6/29/17

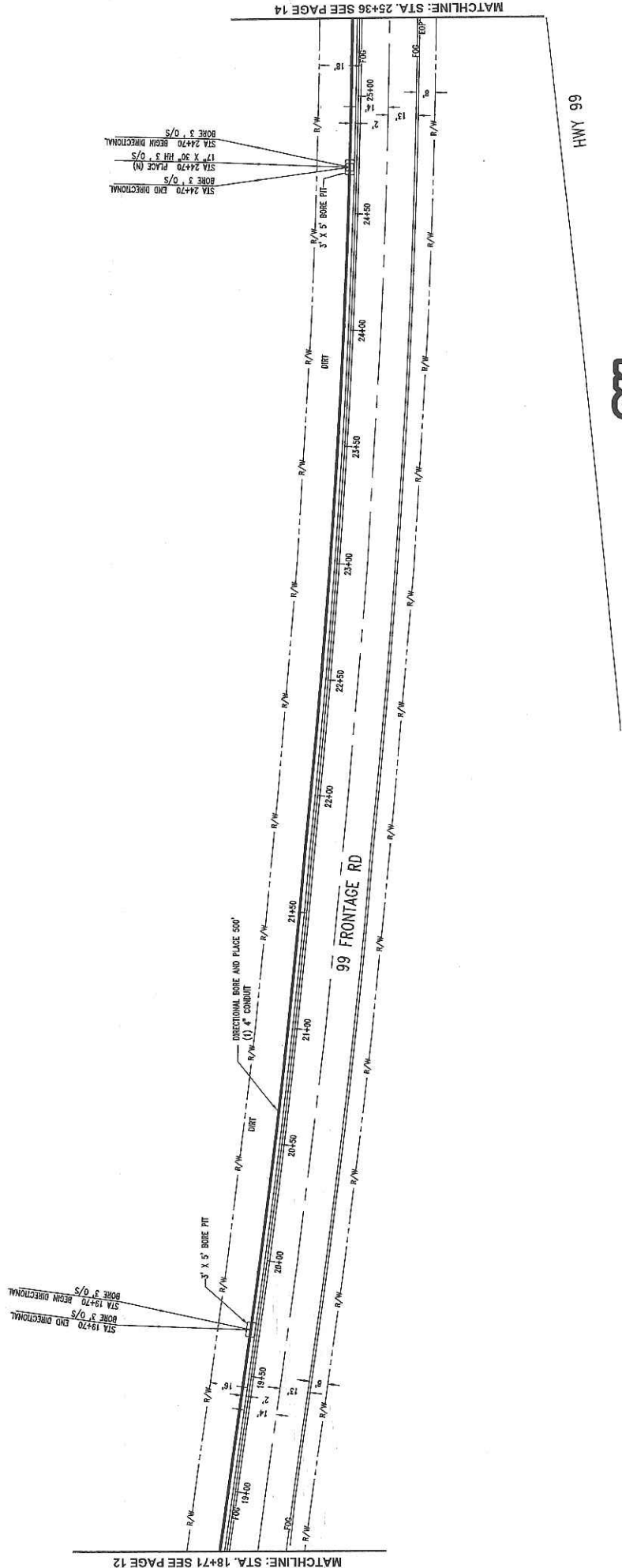


Know what's below.
Call before you dig.



811/800-227-2600

811 Know what's below. Call before you dig.	DATE: 06/17/17 TIME: 10:00 AM PROJECT: 17-0001 SHEET: 12 OF 29
LOCATION MANTECA CALIFORNIA	CONSTRUCTION PLANS
DATE: 06/17/17 TIME: 10:00 AM PROJECT: 17-0001 SHEET: 12 OF 29	DATE: 06/17/17 TIME: 10:00 AM PROJECT: 17-0001 SHEET: 12 OF 29



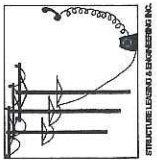
MATCHLINE: STA. 18+71 SEE PAGE 12

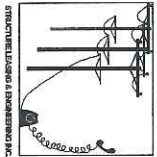
MATCHLINE: STA. 25+36 SEE PAGE 14



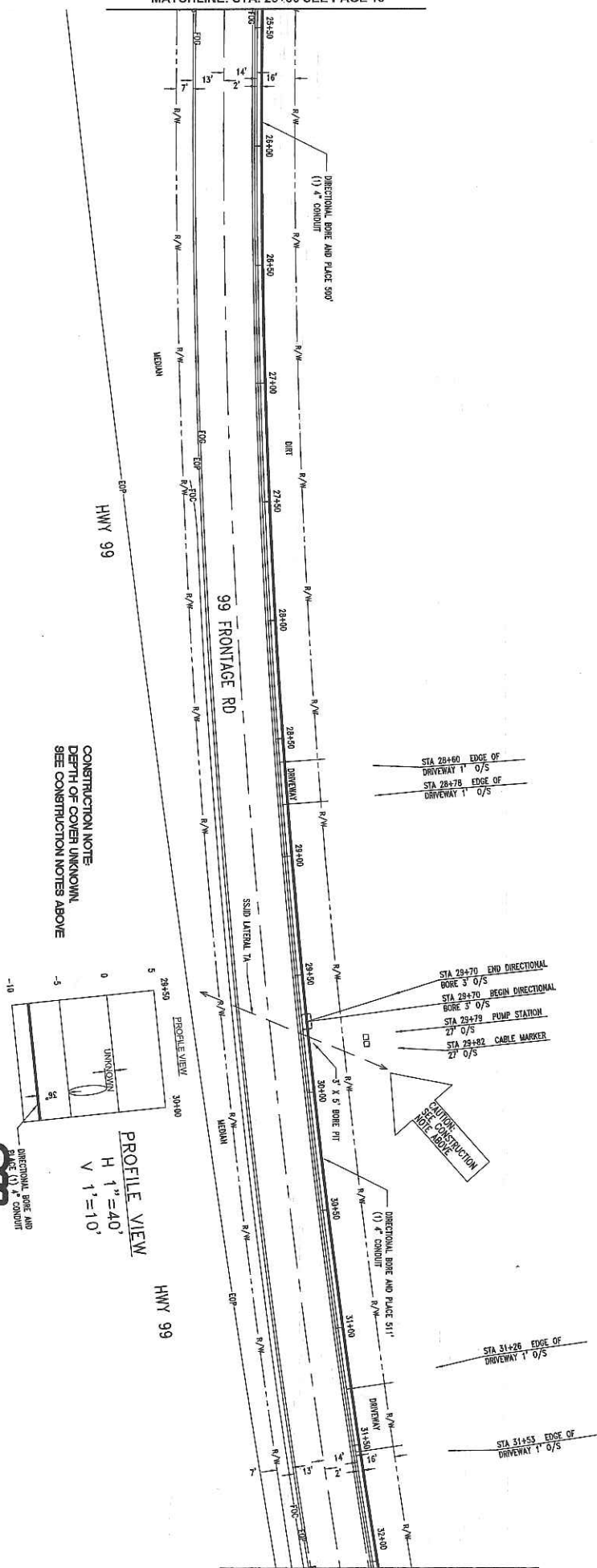
Know what's below.
Call before you dig.
811/800-227-2600

 WAVE ESTIMATING 2115 W. 10TH AVE SUITE 100 MANTENCA, CA 94559 TEL: (925) 255-1100 FAX: (925) 255-1101 WWW.WAVEESTIMATING.COM	FILE NAME: ESTIMATING (2-00)	SCALE: 1" = 40'
	LOCATION: MANTENCA CALIFORNIA	CONSTRUCTION PLANS
DATE: 01/17/17	APPROVED: [Signature]	REFERENCE MAP NUMBER: 13 OF 29





MATCHLINE: STA. 25+36 SEE PAGE 13



CONSTRUCTION NOTE:
DEPTH OF COVER UNKNOWN.
SEE CONSTRUCTION NOTES ABOVE



PROFILE VIEW
H 1"=40'
V 1"=10'

STA 28+80 EDGE OF
DRIVEWAY 1' O/S
STA 28+78 EDGE OF
DRIVEWAY 1' O/S

STA 28+70 END DIRECTIONAL
BORE 3' O/S
STA 28+70 BEGIN DIRECTIONAL
BORE 3' O/S
STA 28+79 PUMP STATION
27' O/S
STA 29+82 CABLE MARKER
27' O/S

CAUTION
SEE CONSTRUCTION
NOTES ABOVE

STA 31+26 EDGE OF
DRIVEWAY 1' O/S

STA 31+53 EDGE OF
DRIVEWAY 1' O/S

- CONSTRUCTION NOTE:
- WAIVE CONTRACTOR TO USA BORE LOCATION CROSSING SSJID AND CALL SSJID INSPECTOR (24) HOURS IN ADVANCE TO APPEAR MANDATORY PRE CONSTRUCTION MEETING. JERRY DONAHUE 04 209-249-4696 04 209-682-2987
 - CONTRACTOR WILL BE GIVEN POTHOLE AND BORE REQUIREMENTS BY SSJID INSPECTOR PRIOR TO START OF CONSTRUCTION
 - CONTRACTOR TO VERIFY DEPTH OF COVER AND PIPE DIAMETER PRIOR TO START OF BORING OPERATIONS



MATCHLINE: STA. 32+00 SEE PAGE 15

811
Know what's below.
Call before you dig.
811/800-227-2600

PROJECT: WAVE LOCATION: MANTECA CALIFORNIA	SCALE: 1"=40' DATE: 5/27/2014 (C-10)
DRAWN BY: MANTICA DATE: 5/27/2014	CONSTRUCTION PLANS 14 OF 29

MATCHLINE: STA. 38+70 SEE PAGE 15

STA 39+24 POWER POLE
52' 0/S

STA 39+26 POWER POLE
7' 0/S

STA 39+81 END
DIRECTIONAL BORE 3' 0/S

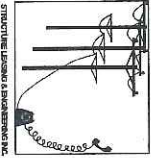
STA 39+81 BEGIN
DIRECTIONAL BORE 3' 0/S

HWY 99

STA 42+82 POWER POLE
7' 0/S

STA 44+81 END DIRECTIONAL
BORE 3' 0/S
STA 44+81 PLACE 17"x30"
HANDHOLE 3' 0/S
STA 44+81 BEGIN
DIRECTIONAL BORE 3' 0/S

MATCHLINE: STA. 45+33 SEE PAGE 17



811
Know what's below.
Call before you dig.
811/800-227-2600

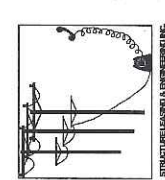
PROJECT NO. 09-000000 DATE 6/29/17	DATE 6/29/17 REFERENCE MAP NUMBER 16 OF 29
LOCATION MANTECA CALIFORNIA	SCALE 1" = 40' SHEET NO. 16 OF 29
DRAWN BY DATE	CHECKED BY DATE





Know what's below.
Call before you dig.
811/800-227-2600

PROJECT NAME WAVE 2.5" WAVELENGTH 2.5" WAVELENGTH 2.5" WAVELENGTH	SCALE 1" = 40'	FILE NAME SUBS01A (3-20)
LOCATION MANTECA CALIFORNIA	CONSTRUCTION PLANS	
DATE 9/29/17	REFERENCE MAP NUMBER	17 OF 29



STRUCTURAL ENGINEERING INC.

MATCHLINE: STA. 51+97 SEE PAGE 18

STA 49+81 END DIRECTIONAL
BORE 3' O/S
STA 49+81 DIRECTIONAL BORE 3' O/S
STA 49+93 POWER POLE

STA 46+32 TELCO
HANDHOLE 6' O/S
STA 46+37 POWER POLE

DIRECTIONAL BORE AND PLACE 500'
(1) 4" CONDUIT

HWY 99

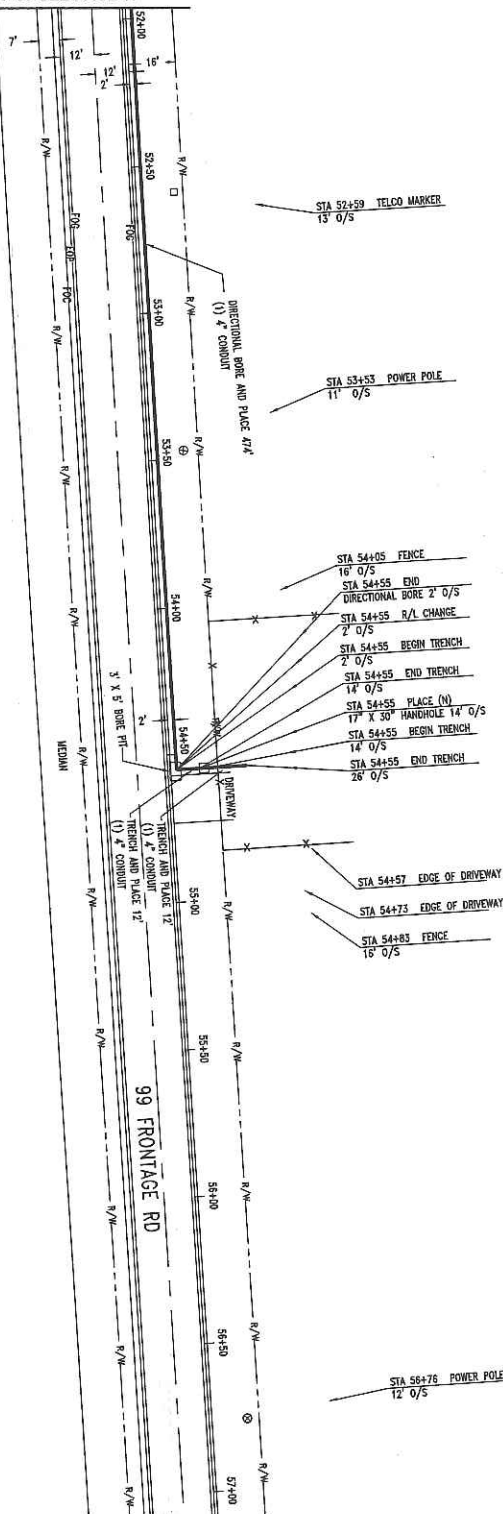
MATCHLINE: STA. 45+33 SEE PAGE 16





MATCHLINE: STA. 51+97 SEE PAGE 17

HWY 99



99 FRONTAGE RD

STA 56+76 POWER POLE
12' 0/S



811
Know what's below.
Call before you dig.
811/800-227-2600

WAVE CONSTRUCTION GROUP 2000 UNIVERSITY AVENUE SUITE 100 SAN FRANCISCO, CA 94133-6780 PHONE: 415.774.2200 FAX: 415.774.2201 E-MAIL: info@waveconstruction.com WWW: www.waveconstruction.com	LOCATION:	MANITCA CALIFORNIA	CONSTRUCTION PLANS	SHEET NO. 1 OF 40	FILE NAME: 55270-D-159
	PROMOTIVE AND CONCEPTUAL PROPOSAL	DRAWING NO. DATE: 8/29/17	REVISIONS AND NOTES	DATE:	

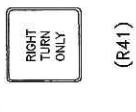
SYMBOLS AND LEGENDS



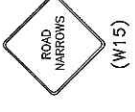
(C13)



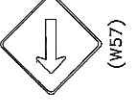
(C24)



(R49M)



(W16-1P)



A 3x3 grid of dots arranged in a triangular pattern. The top row has 3 dots, the middle row has 2 dots, and the bottom row has 1 dot.

2. ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES (SEQUENTIAL ARROWS, BARRICADES, STEEL PLATES) MAY BE REQUIRED.

NOTE TO CONTRACTOR:
 ALL SIGNS AND TAPERS MUST BE PLACED IN ADVANCE OF ANY POST-TRAFFIC TRAFFIC ARE TO
 BE RESTRICTED AND/OR AFFECTED. USE THE FOLLOWING
 SIGNS TO BLOCK AND REDIRECT FOOT TRAFFIC.



W20-1 (STANDARD)
 18" x 24" (MIN.)
 18" x 12" (MIN.)
 18" x 12" (STANDARD)
 18" x 12"



C24 (STANDARD)
 20" x 24" (MIN.)
 20" x 24" (STANDARD)
 20" x 24"

TABLE 6H-4(CA)

TAPER LENGTH CRITERIA FOR ADVANCE WARNING CONTROL ZONES
 (FOR 12 FEET OFFSET WIDTH)

Speed S (mph)	MINIMUM TAPER LENGTH** FOR WIDTH OF OFFSET 12 FEET			
	MERGING L (FEET)	SHIFTING L/2 (FEET)	SHOULDER L3 (FEET)	DOWN STREAM (FEET)**
20	30	40	27	60
25	35	45	32	70
30	40	50	37	80
35	45	55	42	90
40	50	60	47	100
45	55	65	52	110
50	60	70	57	120
55	65	75	62	130
60	70	80	67	140
65	75	85	72	150
70	80	90	77	160
75	85	95	82	170
80	90	100	87	180
85	95	105	92	190
90	100	110	97	200
95	105	115	102	210
100	110	120	107	220
105	115	125	112	230
110	120	130	117	240
115	125	135	122	250
120	130	140	127	260
125	135	145	132	270
130	140	150	137	280
135	145	155	142	290
140	150	160	147	300
145	155	165	152	310
150	160	170	157	320
155	165	175	162	330
160	170	180	167	340
165	175	185	172	350
170	180	190	177	360
175	185	195	182	370
180	190	200	187	380
185	195	205	192	390
190	200	210	197	400
195	205	215	202	410
200	210	220	207	420
205	215	225	212	430
210	220	230	217	440
215	225	235	222	450
220	230	240	227	460
225	235	245	232	470
230	240	250	237	480
235	245	255	242	490
240	250	260	247	500
245	255	265	252	510
250	260	270	257	520
255	265	275	262	530
260	270	280	267	540
265	275	285	272	550
270	280	290	277	560
275	285	295	282	570
280	290	300	287	580
285	295	305	292	590
290	300	310	297	600
295	305	315	302	610
300	310	320	307	620
305	315	325	312	630
310	320	330	317	640
315	325	335	322	650
320	330	340	327	660
325	335	345	332	670
330	340	350	337	680
335	345	355	342	690
340	350	360	347	700
345	355	365	352	710
350	360	370	357	720
355	365	375	362	730
360	370	380	367	740
365	375	385	372	750
370	380	390	377	760
375	385	395	382	770
380	390	400	387	780
385	395	405	392	790
390	400	410	397	800
395	405	415	402	810
400	410	420	407	820
405	415	425	412	830
410	420	430	417	840
415	425	435	422	850
420	430	440	427	860
425	435	445	432	870
430	440	450	437	880
435	445	455	442	890
440	450	460	447	900
445	455	465	452	910
450	460	470	457	920
455	465	475	462	930
460	470	480	467	940
465	475	485	472	950
470	480	490	477	960
475	485	495	482	970
480	490	500	487	980
485	495	505	492	990
490	500	510	497	1000
495	505	515	502	1010
500	510	520	507	1020
505	515	525	512	1030
510	520	530	517	1040
515	525	535	522	1050
520	530	540	527	1060
525	535	545	532	1070
530	540	550	537	1080
535	545	555	542	1090
540	550	560	547	1100
545	555	565	552	1110
550	560	570	557	1120
555	565	575	562	1130
560	570	580	567	1140
565	575	585	572	1150
570	580	590	577	1160
575	585	595	582	1170
580	590	600	587	1180
585	595	605	592	1190
590	600	610	597	1200
595	605	615	602	1210
600	610	620	607	1220
605	615	625	612	1230
610	620	630	617	1240
615	625	635	622	1250
620	630	640	627	1260
625	635	645	632	1270
630	640	650	637	1280
635	645	655	642	1290
640	650	660	647	1300
645	655	665	652	1310
650	660	670	657	1320
655	665	675	662	1330
660	670	680	667	1340
665	675	685	672	1350
670	680	690	677	1360
675	685	695	682	1370
680	690	700	687	1380
685	695	705	692	1390
690	700	710	697	1400
695	705	715	702	1410
700	710	720	707	1420
705	715	725	712	1430
710	720	730	717	1440
715	725	735	722	1450
720	730	740	727	1460
725	735	745	732	1470
730	740	750	737	1480
735	745	755	742	1490
740	750	760	747	1500
745	755	765	752	1510
750	760	770	757	1520
755	765	775	762	1530
760	770	780	767	1540
765	775	785	772	1550
770	780	790	777	1560
775	785	795	782	1570
780	790	800	787	1580
785	795	805	792	1590
790	800	810	797	1600
795	805	815	802	1610
800	810	820	807	1620
805	815	825	812	1630
810	820	830	817	1640
815	825	835	822	1650
820	830	840	827	1660
825	835	845	832	1670
830	840	850	837	1680
835	845	855	842	1690
840	850	860	847	1700
845	855	865	852	1710
850	860	870	857	1720
855	865	875	862	1730
860	870	880	867	1740
865	875	885	872	1750
870	880	890	877	1760
875	885	895	882	1770
880	890	900	887	1780
885	895	905	892	1790
890	900	910	897	1800
895	905	915	902	1810
900	910	920	907	1820
905	915	925	912	1830
910	920	930	917	1840
915	925	935	922	1850
920	930	940	927	1860
925	935	945	932	1870
930	940	950	937	1880
935	945	955	942	1890
940	950	960	947	1900
945	955	965	952	1910
950	960	970	957	1920
955	965	975	962	1930
960	970	980	967	1940
965	975	985	972	1950
970	980	990	977	1960
975	985	995	982	1970
980	990	1000	987	1980
985	995	1005	992	1990
990	1000	1010	997	2000
995	1005	1015	1002	2010
1000	1010	1020	1007	2020
1005	1015	1025	1012	2030
1010	1020	1030	1017	2040
1015	1025	1035	1022	2050
1020	1030	1040	1027	2060
1025	1035	1045	1032	2070
1030	1040	1050	1037	2080
1035	1045	1055	1042	2090
1040	1050	1060	1047	2100
1045	1055	1065	1052	2110
1050	1060	1070	1057	2120
1055	1065	1075	1062	2130
1060	1070	1080	1067	2140
1065	1075	1085	1072	2150
1070	1080	1090	1077	2160
1075	1085	1095	1082	2170
1080	1090	1100	1087	2180
1085	1095	1105	1092	2190
1090	1100	1110	1097	2200
1095	1105	1115	1102	2210
1100	1110	1120	1107	2220
1105	1115	1125	1112	2230
1110	1120	1130	1117	2240
1115	1125	1135	1122	2250
1120	1130	1140	1127	2260
1125	1135	1145	1132	2270
1130	1140	1150	1137	2280
1135	1145	1155	1142	2290
1140	1150	1160	1147	2300
1145	1155	1165	1152	2310
1150	1160	1170	1157	2320
1155	1165	1175	1162	2330
1160	1170	1180	1167	2340
1165	1175	1185	1172	2350
1170	1180	1190	1177	2360
1175	1185	1195	1182	2370
1180	1190	1200	1187	2380
1185	1195	1205	1192	2390
1190	1200	1210	1197	2400
1195	1205	1215	1202	2410
1200	1210	1220	1207	2420
1205	1215	1225	1212	2430
1210	1220	1230	1217	2440
1215	1225	1235	1222	2450
1220	1230	1240	1227	2460
1225	1235	1245	1232	2470
1230	1240	1250	1237	2480
1235	1245	1255	1242	2490
1240	1250	1260	1247	2500
1245	1255	1265	1252	2510
1250	1260	1270	1257	2520
1255	1265	1275	1262	2530
1260	1270	1280	1267	2540
1265	1275	1285	1272	2550
1270	1280	1290	1277	2560
1275	1285	1295	1282	2570
1280	1290	1300	1287	2580
1285	1295	1305	1292	2590
1290	1300	1310	1297	2600
1295	1305	1315	1302	2610
1300	1310	1320	1307	2620
1305	1315	1325	1312	2630
1310	1320	1330	1317	2640
1315	1325	1335	1322	2650
1320	1330	1340	1327	2660
1325	1335	1345	1332	2670
1330	1340	1350	1337	2680
1335	1345	1355	1342	2690
1340	1350	1360	1347	2700
1345	1355	1365	1352	2710
1350	1360	1370	1357	2720
1355	1365	1375	1362	2730
1360	1370	1380	1367	2740
1365	1375</			

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

20"x32" (MIN.)
35"x35" (STANDARD)
FR-11c

18"x42" (STANDARD)
FR-11c

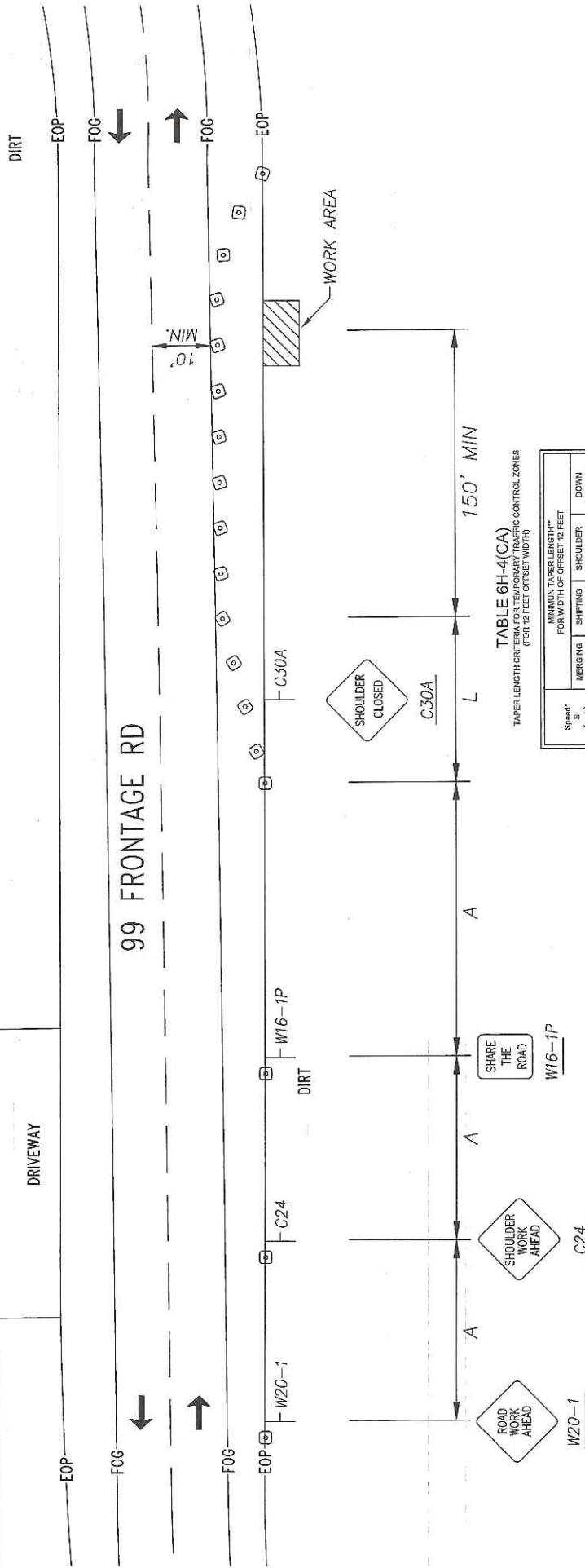


TABLE 6H-4(CA)
TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES
(FOR 12 FEET OFFSET WIDTH)

Speed* S (mph)	MINIMUM TAPER LENGTH** FOR WIDTH OF OFFSET 12 FEET			
	MERGING L (FEET)	SHIFTING L/2 (FEET)	SHOULDER L/2 (FEET)	DOWN STREAM L/2 (FEET)
20	85	40	27	80
25	105	50	34	100
30	125	60	41	120
35	145	70	48	140
40	165	80	56	160
45	185	90	63	180
50	205	100	70	200
55	225	110	78	220
60	245	120	85	240
65	265	130	93	260
70	285	140	100	280
75	305	150	108	300

TABLE 6H-4.
FORMULAS FOR DETERMINING TAPER LENGTH

SPEED (S)	TAPER LENGTH (L) IN FEET
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR MORE	$L = WS$

Where: L = taper length in feet
S = posted speed limit, or off-peak 85th percentile speed prior to starting, or the anticipated operating speed in mph.
W = width of offset in feet.

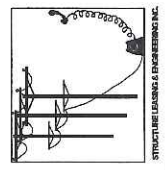


Know what's below.
Call before you dig.
811/800-227-2600

TABLE 6H-3
RECOMMENDED ADVANCE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS**			
	A	B	C	D
URBAN 35 MPH OR LESS***	100 FEET	100 FEET	100 FEET	100 FEET
URBAN 40 MPH TO 45 MPH***	150 FEET	150 FEET	150 FEET	150 FEET
URBAN MORE THAN 45 MPH***	200 FEET	200 FEET	200 FEET	200 FEET
RURAL 35 MPH OR LESS***	350 FEET	350 FEET	350 FEET	350 FEET
RURAL 40 MPH TO 45 MPH***	500 FEET	500 FEET	500 FEET	500 FEET
RURAL MORE THAN 45 MPH***	1000 FEET	1000 FEET	1000 FEET	1000 FEET
EXPRESSWAY/FREEWAY	1000 FEET	1000 FEET	1000 FEET	2000 FEET

REVIEWED () AS NOTED) BY:
DATE: / / 20
PERMIT #:
PROJECT INSPECTOR MAY MODIFY
THIS PLAN FOR FIELD CONDITIONS
FIELD CONDITIONS DICTATE



FILE NAME: 20200701A (3-10)
SCALE: N.T.S.
LOCATION: MANTECA, CALIFORNIA
TRAFFIC CONTROL
DATE: 6/28/17
REFERENCE MAP NUMBER: 21 OF 29

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

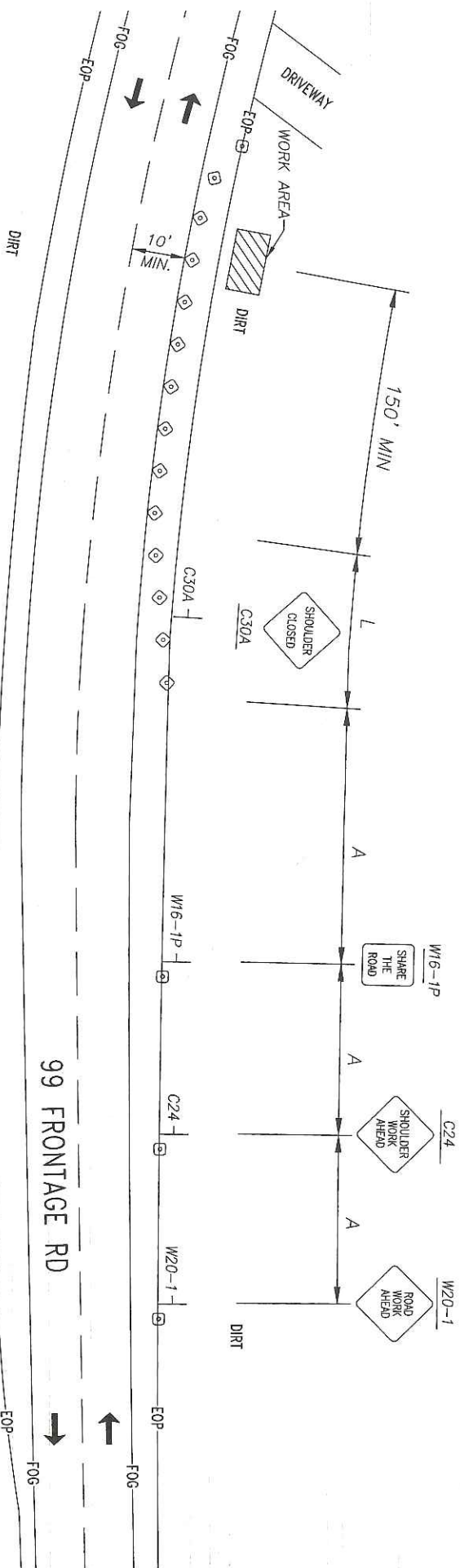
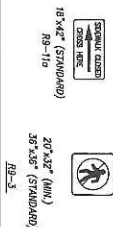


TABLE 6H-3

RECOMMENDED ADVANCE WARNING SIGN SPACING

ROAD TYPE	A	B	C
URBAN 25 MPH OR LESS**	100 FEET	100 FEET	100 FEET
URBAN 25 MPH TO 40 MPH**	200 FEET	200 FEET	200 FEET
URBAN 40 MPH TO 60 MPH**	300 FEET	300 FEET	300 FEET
URBAN 60 MPH TO 80 MPH**	400 FEET	400 FEET	400 FEET
URBAN 80 MPH TO 100 MPH**	500 FEET	500 FEET	500 FEET
URBAN 100 MPH OR MORE**	600 FEET	600 FEET	600 FEET
URBAN 25 MPH OR LESS**	100 FEET	100 FEET	100 FEET
URBAN 25 MPH TO 40 MPH**	200 FEET	200 FEET	200 FEET
URBAN 40 MPH TO 60 MPH**	300 FEET	300 FEET	300 FEET
URBAN 60 MPH TO 80 MPH**	400 FEET	400 FEET	400 FEET
URBAN 80 MPH TO 100 MPH**	500 FEET	500 FEET	500 FEET
URBAN 100 MPH OR MORE**	600 FEET	600 FEET	600 FEET

TABLE 6H-4(CA)

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES
(FOR 12 FEET OF SET WIDTH)

MINIMUM TAPER LENGTH** FOR WIDTH OF OFFSET 12 FEET				
Speed (mph)	MERGINGS (FEET)	SHIFTS L/O (FEET)	SHOULDER L/O (FEET)	DOWN STREAM DRAIN (FEET)**
20	60	40	27	50
25	75	60	40	50
30	100	80	60	50
35	125	100	80	50
40	150	125	100	50
45	175	150	125	50
50	200	175	150	50
55	225	200	175	50
60	250	225	200	50
65	275	250	225	50
70	300	275	250	50
75	325	300	275	50
80	350	325	300	50
85	375	350	325	50
90	400	375	350	50
95	425	400	375	50
100	450	425	400	50
105	475	450	425	50
110	500	475	450	50
115	525	500	475	50
120	550	525	500	50
125	575	550	525	50
130	600	575	550	50
135	625	600	575	50
140	650	625	600	50
145	675	650	625	50
150	700	675	650	50
155	725	700	675	50
160	750	725	700	50
165	775	750	725	50
170	800	775	750	50
175	825	800	775	50
180	850	825	800	50
185	875	850	825	50
190	900	875	850	50
195	925	900	875	50
200	950	925	900	50
205	975	950	925	50
210	1000	975	950	50
215	1025	1000	975	50
220	1050	1025	1000	50
225	1075	1050	1025	50
230	1100	1075	1050	50
235	1125	1100	1075	50
240	1150	1125	1100	50
245	1175	1150	1125	50
250	1200	1175	1150	50
255	1225	1200	1175	50
260	1250	1225	1200	50
265	1275	1250	1225	50
270	1300	1275	1250	50
275	1325	1300	1275	50
280	1350	1325	1300	50
285	1375	1350	1325	50
290	1400	1375	1350	50
295	1425	1400	1375	50
300	1450	1425	1400	50
305	1475	1450	1425	50
310	1500	1475	1450	50
315	1525	1500	1475	50
320	1550	1525	1500	50
325	1575	1550	1525	50
330	1600	1575	1550	50
335	1625	1600	1575	50
340	1650	1625	1600	50
345	1675	1650	1625	50
350	1700	1675	1650	50
355	1725	1700	1675	50
360	1750	1725	1700	50
365	1775	1750	1725	50
370	1800	1775	1750	50
375	1825	1800	1775	50
380	1850	1825	1800	50
385	1875	1850	1825	50
390	1900	1875	1850	50
395	1925	1900	1875	50
400	1950	1925	1900	50
405	1975	1950	1925	50
410	2000	1975	1950	50
415	2025	2000	1975	50
420	2050	2025	2000	50
425	2075	2050	2025	50
430	2100	2075	2050	50
435	2125	2100	2075	50
440	2150	2125	2100	50
445	2175	2150	2125	50
450	2200	2175	2150	50
455	2225	2200	2175	50
460	2250	2225	2200	50
465	2275	2250	2225	50
470	2300	2275	2250	50
475	2325	2300	2275	50
480	2350	2325	2300	50
485	2375	2350	2325	50
490	2400	2375	2350	50
495	2425	2400	2375	50
500	2450	2425	2400	50
505	2475	2450	2425	50
510	2500	2475	2450	50
515	2525	2500	2475	50
520	2550	2525	2500	50
525	2575	2550	2525	50
530	2600	2575	2550	50
535	2625	2600	2575	50
540	2650	2625	2600	50
545	2675	2650	2625	50
550	2700	2675	2650	50
555	2725	2700	2675	50
560	2750	2725	2700	50
565	2775	2750	2725	50
570	2800	2775	2750	50
575	2825	2800	2775	50
580	2850	2825	2800	50
585	2875	2850	2825	50
590	2900	2875	2850	50
595	2925	2900	2875	50
600	2950	2925	2900	50
605	2975	2950	2925	50
610	3000	2975	2950	50
615	3025	3000	2975	50
620	3050	3025	3000	50
625	3075	3050	3025	50
630	3100	3075	3050	50
635	3125	3100	3075	50
640	3150	3125	3100	50
645	3175	3150	3125	50
650	3200	3175	3150	50
655	3225	3200	3175	50
660	3250	3225	3200	50
665	3275	3250	3225	50
670	3300	3275	3250	50
675	3325	3300	3275	50
680	3350	3325	3300	50
685	3375	3350	3325	50
690	3400	3375	3350	50
695	3425	3400	3375	50
700	3450	3425	3400	50
705	3475	3450	3425	50
710	3500	3475	3450	50
715	3525	3500	3475	50
720	3550	3525	3500	50
725	3575	3550	3525	50
730	3600	3575	3550	50
735	3625	3600	3575	50
740	3650	3625	3600	50
745	3675	3650	3625	50
750	3700	3675	3650	50
755	3725	3700	3675	50
760	3750	3725	3700	50
765	3775	3750	3725	50
770	3800	3775	3750	50
775	3825	3800	3775	50
780	3850	3825	3800	50
785	3875	3850	3825	50
790	3900	3875	3850	50
795	3925	3900	3875	50
800	3950	3925	3900	50
805	3975	3950	3925	50
810	4000	3975	3950	50
815	4025	4000	3975	50
820	4050	4025	4000	50
825	4075	4050	4025	50
830	4100	4075	4050	50
835	4125	4100	4075	50
840	4150	4125	4100	50
845	4175	4150	4125	50
850	4200	4175	4150	50
855	4225	4200	4175	50
860	4250	4225	4200	50
865	4275	4250	4225	50
870	4300	4275	4250	50
875	4325	4300	4275	50
880	4350	4325	4300	50
885	4375	4350	4325	50
890	4400	4375	4350	50
895	4425	4400	4375	50
900	4450	4425	4400	50
905	4475	4450	4425	50
910	4500	4475	4450	50
915	4525	4500	4475	50
920	4550	4525	4500	50
925	4575	4550	4525	50
930	4600	4575	4550	50
935	4625	4600	4575	50
940	4650	4625	4600	50
945	4675	4650	4625	50
950	4700	4675	4650	50
955	4725	4700	4675	50
960	4750	4725	4700	50
965	4775	4750	4725	50
970	4800	4775	4750	50
975	4825	4800	4775	50
980	4850	4825	4800	50
985	4875	4850	4825	50
990	4900	4875	4850	50
995	4925	4900	4875	50
1000	4950	4925	4900	50

** Posted speed, off-peak 85th percentile speed prior to tapering, or the anticipated operating speed in mph.

For other criteria use following length taper formula for L:
For speeds of 45 mph or more, L = WS/200

Where: L = taper length in feet

W = width of offset in feet
S = posted speed limit, off-peak 85th percentile speed prior to work starting, or the anticipated operating speed in mph.

Maximum downstream taper length is 100 feet. See Section 6C.08.

TABLE 6H-4.

FORMULAS FOR DETERMINING TAPER LENGTH

SPEED (S)	TAPER LENGTH (L) IN FEET
40 MPH OR LESS	L = WS/200
45 MPH OR MORE	L = WS/150

Where: L = taper length in feet

W = width of offset in feet
S = posted speed limit, off-peak 85th percentile speed prior to work starting, or the anticipated operating speed in mph.



PROJECT: WAVE
LOCATION: MANTENCA, CALIFORNIA
DATE: 01/24/2017
SCALE: AS SHOWN
SHEET: 22 OF 29
TRAFFIC CONTROL


 NO SMOKING ALLOWED
 EXCEPT WHERE
 CROSS HERE

18' x 42" (STANDARD)
 R#-11c


 NO PEDESTRIAN
 EXCEPT WHERE
 CROSS HERE

20' x 32" (MIN.)
 36' x 36" (STANDARD)
 R#-3

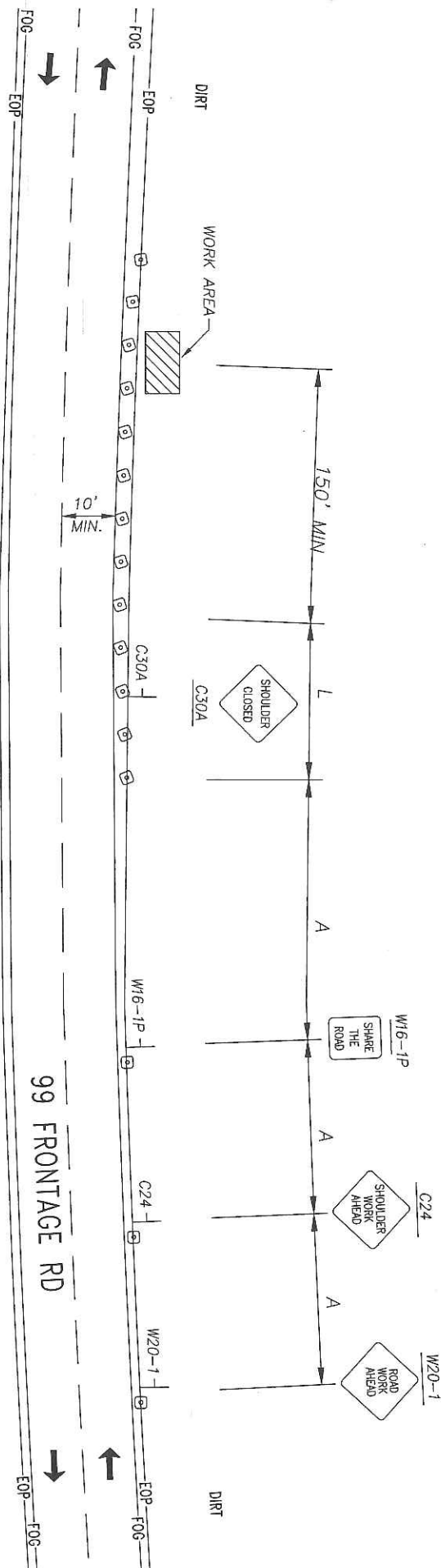


TABLE 6H-4(CA)
TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES
(FOR 12 FEET OFFSET WIDTH)

MINIMUM TAPE LENGTH 15 FEET						
FOR WIDE OF EARTH 15 FEET						
Speed ¹ S (mph)	MERGERS		SHOULDER		DOWN	
	L (FEET)	U/L (FEET)	L (FEET)	U/L (FEET)	STREET (FEET) ²	STREET (FEET) ²
20	80	40	27		50	
25	125	63	42		50	
30	180	90	60		50	
35	245	123	82		50	
40	320	160	110		50	
45	400	200	140		50	
50	500	250	200		50	
55	660	330	260		50	
60	720	360	240		50	
65	780	390	260		50	
70	840	420	280		50	
75	900	450	300		50	

MEDIAN

TABLE 6H-4.

SPEED (S)	TAPER LENGTH (L) IN FEET
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR MORE	$L = WS$

* Posted speed, off-peak 85th percentile speed prior to starting, or the anticipated

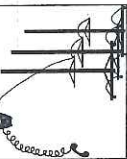
For other offsets use following merging taper length formula for L:

For speeds of 40 mph or less $L=WS^2$. For speeds of 45 mph or more, $L=WS$.

Where: L = taper length in feet

W = width of offset in feet.
S = posted speed limit, off peak 85th percentile speed prior to work starting, or the anticipated operating speed in mph.

Maximum downstream taper length is 100 feet. See Section 6C.08.



REVIEWED (AS NOTED) BY
DATE: ____/____/20____
PERMIT #: _____
PROJECT INSPECTOR MAY MODIFY
TRAFFIC CONTROL PLANS AS
FIELD CONDITIONS DICTATE

TABLE 6H-3

ROAD TYPE	DISTANCE BETWEEN SIGNS ^{***}		
	A	B	C
URBAN 25 MPH OR LESS ^{***}	100 FEET	100 FEET	100 FEET
URBAN 30-40 MPH ^{***}	250 FEET	250 FEET	250 FEET
URBAN MORE THAN 40 MPH ^{***}	350 FEET	350 FEET	350 FEET
RURAL	500 FEET	500 FEET	500 FEET
EXPRESSWAY/FREEWAY	1000 FEET	1000 FEET	2000 FEET

**Know what's below.
Call before you dig**

811/800-227-2600

 WAVE WASHINGTON COUNTY 216.000.0000 PROJECTS AND CONSTRUCTION INFORMATION	SCALE: _____ N.T.S.	FILE NAME: 563701A (3-10)
	TRAFFIC CONTROL	
LOCATION: MANITICA CALIFORNIA	DATE: 03/29/17 APPROVED: _____ RETURNED MAP NUMBER: 24 OF 29	

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

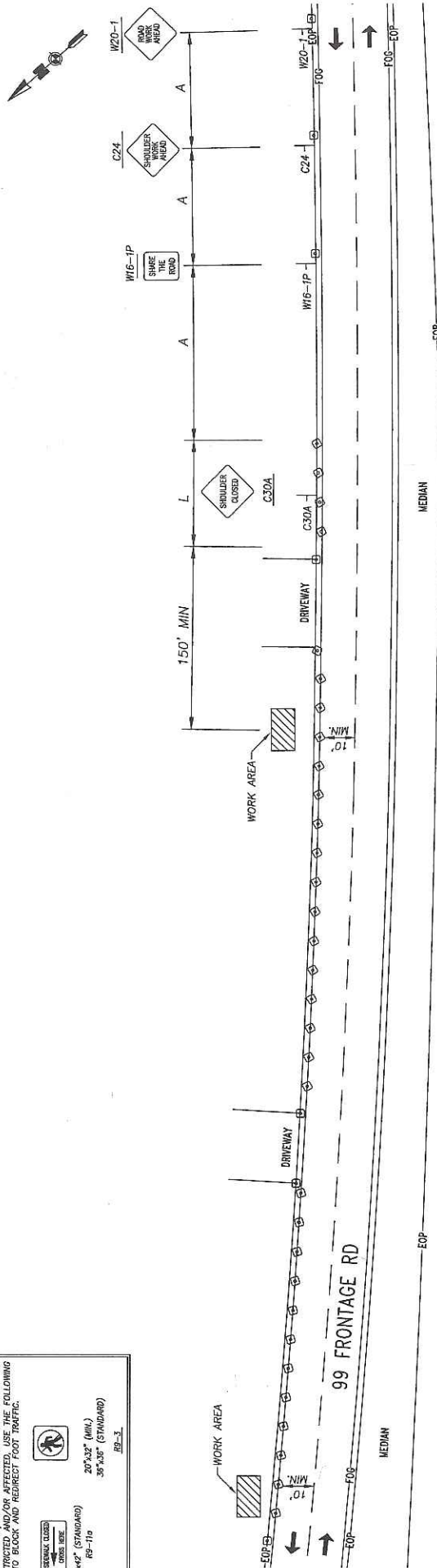


20'x32" (MIN.)
35'x45" (STANDARD)
RB-11a



15'x45" (STANDARD)
RB-11b

RB-11



HWY 99

TABLE 6H-4(CA)
TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES
(FOR 12 FEET OFFSET WIDTH)

Speed* (mph)	MINIMUM TAPER LENGTH** FOR WIDTH OF OFFSET 12 FEET
20	100
25	125
30	150
35	175
40	200
45	225
50	250
55	275
60	300
65	325
70	350
75	375

* Posted speed, off-peak 85th percentile speed prior to starting, or the anticipated operating speed in mph.

** For other classes use following merging taper length formula for L:
For speeds of 45 mph or more, L = WS
Where: L = taper length in feet
S = posted speed limit, off-peak 85th percentile speed prior to work starting, or the anticipated operating speed in mph.

** Maximum downstream taper length is 100 feet. See Section 6C.08.

TABLE 6H-4.

FORMULAS FOR DETERMINING TAPER LENGTH

SPEED (S)	TAPER LENGTH (L) IN FEET
40 MPH OR LESS	$L = WS/2$
45 MPH OR MORE	$L = WS$

Where: L = taper length in feet
S = posted speed limit, or off-peak 85th percentile speed prior to work starting, or the anticipated operating speed in mph.



Know what's below.
Call before you dig.

811/800-227-2600

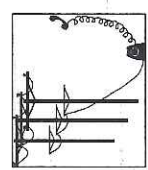
TABLE 6H-3

RECOMMENDED ADVANCE WARNING SIGN SPACING

ROAD TYPE	A	B	C
URBAN 25 MPH OR LESS**	100 FEET	100 FEET	100 FEET
URBAN 30-35 MPH**	200 FEET	200 FEET	250 FEET
URBAN 40-45 MPH**	300 FEET	300 FEET	350 FEET
URBAN 50-55 MPH**	400 FEET	400 FEET	450 FEET
URBAN 60-65 MPH**	500 FEET	500 FEET	550 FEET
URBAN 70-75 MPH**	600 FEET	600 FEET	650 FEET
URBAN 80-85 MPH**	700 FEET	700 FEET	750 FEET
URBAN 90-95 MPH**	800 FEET	800 FEET	850 FEET
URBAN 100+ MPH**	900 FEET	900 FEET	950 FEET
RURAL	1000 FEET	1000 FEET	1000 FEET
EXPRESSWAY/FREEWAY	1000 FEET	1000 FEET	1000 FEET

REVIEWED () AS NOTED) BY:

DATE: / /
PERMIT NO. /
PROJECT INSPECTOR MAY MODIFY
FIELD CONDITIONS DICTATE



STRUCTURE LEASING & ENGINEERING INC.

FILE NAME: 801001A (3-10)
SCALE: N.T.S.
LOCATION: MANTECA, CALIFORNIA
DATE: 06/29/17
REVISION: MAP NUMBER: 25 OF 29

NOTE TO CONTRACTOR:
IF SIDEWALK AND/OR ANY PEDESTRIAN TRAFFIC ARE TO
BE MAINTAINED AND/OR AFFECTED, THE FOLLOWING
SIGNS TO BLOCK AND REDIRECT FOOT TRAFFIC.

 15'x42' (STANDARD)
R9-11a

 20'x32' (MIN.)
35'x38' (STANDARD)
R9-3

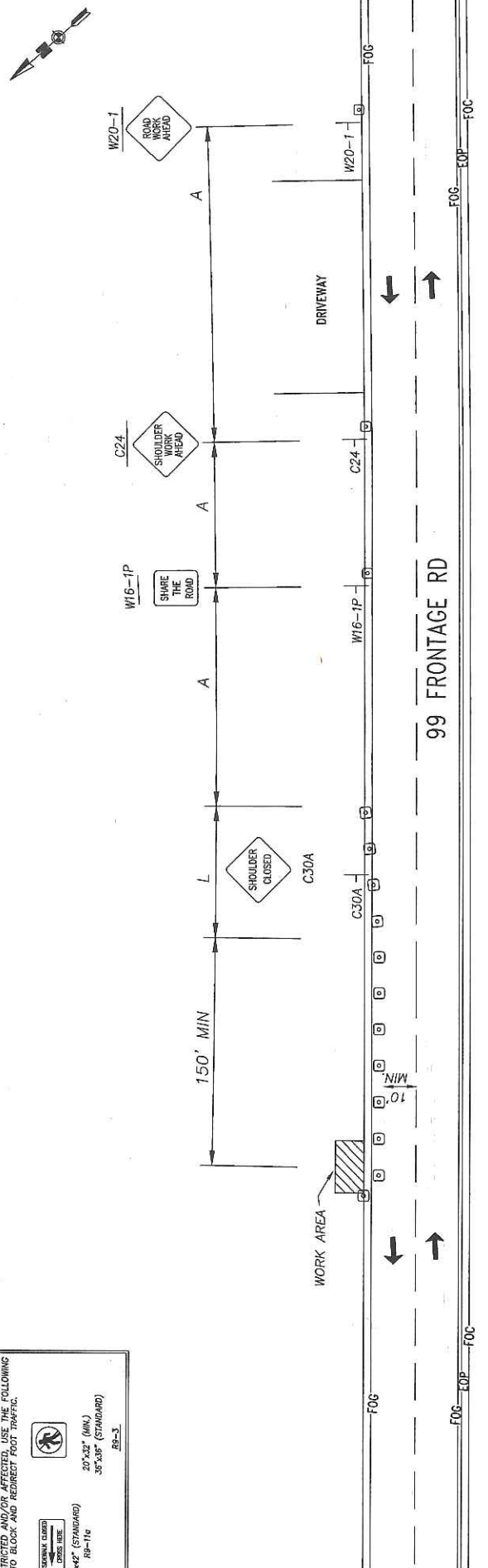


TABLE 6H-4(CA)
TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES
(FOR 12 FEET OFFSET WIDTH)

Speed* (mph)	Merging (feet)	Shifting (feet)	Shoulder (feet)	Down Stream (feet)**
20	80	40	42	50
25	125	63	64	75
30	160	80	80	100
35	245	123	124	150
40	320	160	160	200
45	540	270	270	350
50	600	300	300	400
55	660	330	330	450
60	720	360	360	500
65	780	390	390	550
70	840	420	420	600
75	900	450	450	650

* Posted speed, off-peak 85th percentile speed prior to starting, or the anticipated operating speed in mph.

** For other officials use following spacing taper length formula for L:
For speeds of 40 mph or less: $L = V \times T / 2$
For speeds of 45 mph or more, $L = V \times T$
Where: L = taper length in feet
V = width of offset in feet
T = posted speed limit, or peak 85th percentile speed prior to work starting, or the anticipated operating speed in mph.

*** Maximum downstream taper length is 100 feet. See Section 6C.08.

TABLE 6H-4
FORMULAS FOR DETERMINING TAPER LENGTH

SPEED (S)	TAPER LENGTH (L) IN FEET
40 MPH OR LESS	$L = WS/2$
45 MPH OR MORE	$L = WS$

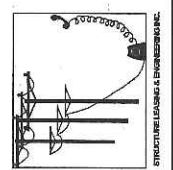
Where: L = taper length in feet
W = width of offset in feet
S = posted speed limit, or off-peak 85th percentile speed prior to starting, or the anticipated operating speed in mph.

811
Know what's below.
Call before you dig.
811/800-227-2600

TABLE 6H-3
RECOMMENDED ADVANCE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS**		
	A	B	C
URBAN 25 MPH OR LESS***	100 FEET	100 FEET	100 FEET
URBAN MORE THAN 25 MPH TO 40 MPH***	250 FEET	250 FEET	250 FEET
URBAN MORE THAN 40 MPH***	300 FEET	350 FEET	350 FEET
EXPRESSWAY/REINWAY	1000 FEET	1000 FEET	2000 FEET

REVIEWED (AS NOTED) BY:
DATE: 1/20/20
PERMIT # 123456789
INSPECTOR MAY MODIFY
TRAFFIC CONTROL PLANS AS
FIELD CONDITIONS DICTATE



NOTE TO CONTRACTOR:
 SIGNAL AND/OR ADVANCE WARNING SIGNS ARE TO BE SET UP AND MAINTAINED BY THE CONTRACTOR. ADVANCE WARNING SIGNS TO BLOCK AND REDIRECT FOOT TRAFFIC.

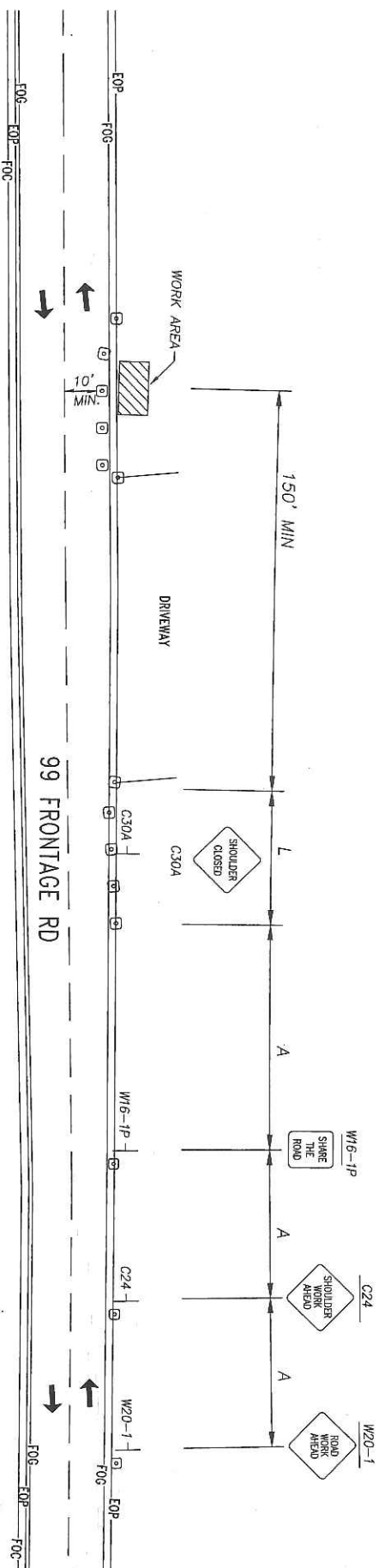
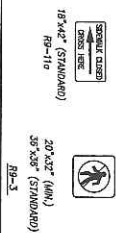


TABLE 6H-4(CA)
 TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES
 (FOR 15 FEET OFFSET WIDTH)

Speed S (mph)	MINIMUM TAPER LENGTH** FOR WIDTH OF OFFSET 12 FEET			
	MISINGS L/2 (FEET)	SHOULDER L/2 (FEET)	DOWN STREAM (FEET)**	
20	50	40	27	50
25	125	53	42	50
30	180	80	60	50
35	245	123	92	50
40	320	160	117	50
45	400	200	150	50
50	500	250	190	50
55	600	300	230	50
60	700	350	270	50
65	800	400	310	50
70	900	450	350	50
75	1000	500	400	50

* Posted speed, off-peak 85th percentile speed prior to starting, or the anticipated operating speed in mph.

** For other offsets use following missing taper length formula for L:
 $L = 1.47 S^2$
 For speeds of 40 mph or less, L = WS/80
 For speeds of 45 mph or more, L = WS

Where: L = taper length in feet

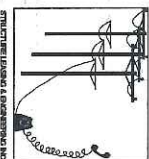
WS = posted speed limit, off-peak 85th percentile speed prior to work starting, or the anticipated operating speed in mph.

Maximum downstream taper length is 100 feet. See Section 6C.08.

TABLE 6H-3
 RECOMMENDED ADVANCE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS**		
	A	B	C
URBAN 25 MPH OR LESS**	100 FEET	100 FEET	100 FEET
URBAN MORE THAN 25 MPH TO 40 MPH**	200 FEET	200 FEET	200 FEET
URBAN MORE THAN 40 MPH**	300 FEET	300 FEET	300 FEET
EXPRESSWAY/FREEWAY	1000 FEET	1600 FEET	2600 FEET

REVIEWED () AS NOTED) BY:
 DATE: 7/20
 PROJECT INSPECTOR MAY MODIFY TRAFFIC CONTROL PLANS AS FIELD CONDITIONS DICTATE



STRUCTURE LIAISON & ENGINEERING, INC.



811/800-227-2600

FORMULAS FOR DETERMINING TAPER LENGTH

SPEED (S)	TAPER LENGTH (L) IN FEET
40 MPH OR LESS	$L = \frac{WS^2}{40}$
45 MPH OR MORE	$L = WS$

Where: L = taper length in feet
 WS = posted speed limit, off-peak 85th percentile speed prior to work starting, or the anticipated operating speed in mph.

PROJECT: **WAVE** LOCATION: **MANATECA CALIFORNIA** SCALE: **AS SHOWN** FILE NAME: **28 OF 29**

DATE: **7/23/17** INTERVIEW: **DATE** NUMBER: **28 OF 29**

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

18"x42" (STANDARD)
RS-116

20"x32" (MIL.)
38"x38" (STANDARD)
RS-116

FR-3



W20-1
ROAD WORK
AHEAD

C24 (CA)
SHOULDER
AHEAD

W16-1P
SHUT
THE
ROAD

150' MIN

DRIVEWAY

WORK AREA

W20-1

C24 (CA)

W16-1P

C30A

99 FRONTAGE RD

MEDIAN

FOC

HWY 99

FOC

TABLE 6H-4(CA)
TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES
(FOR 12 FEET OFFSET WIDTH)

Speed* (mph)	MINIMUM TAPER LENGTH** FOR WIDTH OF OFFSET 12 FEET			
	MERGING L (FEET)	SHIFTING L (FEET)	SHOULDER L (FEET)	DOWN L (FEET)
20	80	40	20	50
25	125	63	42	50
30	160	80	60	50
35	245	123	82	50
40	320	160	107	50
45	540	270	180	50
50	800	350	200	50
55	1000	450	250	50
60	1200	540	300	50
65	1400	630	360	50
70	1600	720	420	50
75	1800	840	480	50
80	2000	960	540	50

* Posted speed, off-peak 85th percentile speed prior to starting, or the anticipated operating speed in mph.

** For other offsets use following modified taper length formula for L:
For speeds of 40 mph or less: $L = WS/20$
For speeds of 45 mph or more, $L = WS$
Where: L = taper length in feet
W = width of offset in feet
S = posted speed limit, off-peak 85th percentile speed prior to work starting, or the anticipated operating speed in mph.



Know what's below.
Call before you dig.

811/800-227-2600

TABLE 6H-4
FORMULAS FOR DETERMINING TAPER LENGTH

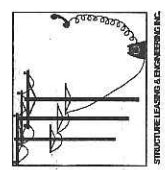
SPEED (S)	TAPER LENGTH (L) IN FEET
40 MPH OR LESS	$L = WS/20$
45 MPH OR MORE	$L = WS$

Where: L = taper length in feet
W = width of offset in feet
S = posted speed limit, or off-peak 85th percentile speed prior to work starting, or the anticipated operating speed in mph.

TABLE 6H-3
RECOMMENDED ADVANCE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS**			
	A	B	C	D
URBAN 25 MPH OR LESS***	100 FEET	100 FEET	100 FEET	100 FEET
URBAN MORE THAN 25 MPH TO 40 MPH***	250 FEET	250 FEET	250 FEET	250 FEET
URBAN MORE THAN 40 MPH***	300 FEET	300 FEET	300 FEET	300 FEET
EXPRESSWAY/FREEWAY	1000 FEET	1000 FEET	1000 FEET	2000 FEET

REVIEWED () AS NOTED) BY:
DATE: / / 20
PERMIT #
INSPECTOR MAY MODIFY
TRAFFIC CONTROL PLANS AS
FIELD CONDITIONS DICTATE



STRUCTURE LEASING & ENGINEERING INC.

astound
215 W. MAIN ST. SUITE 100
SAN ANTONIO, TX 78205
TEL: 214-222-8888
WWW.ASTOUND.COM

LOCATION: MANTECA, CALIFORNIA

DATE: 05/29/17

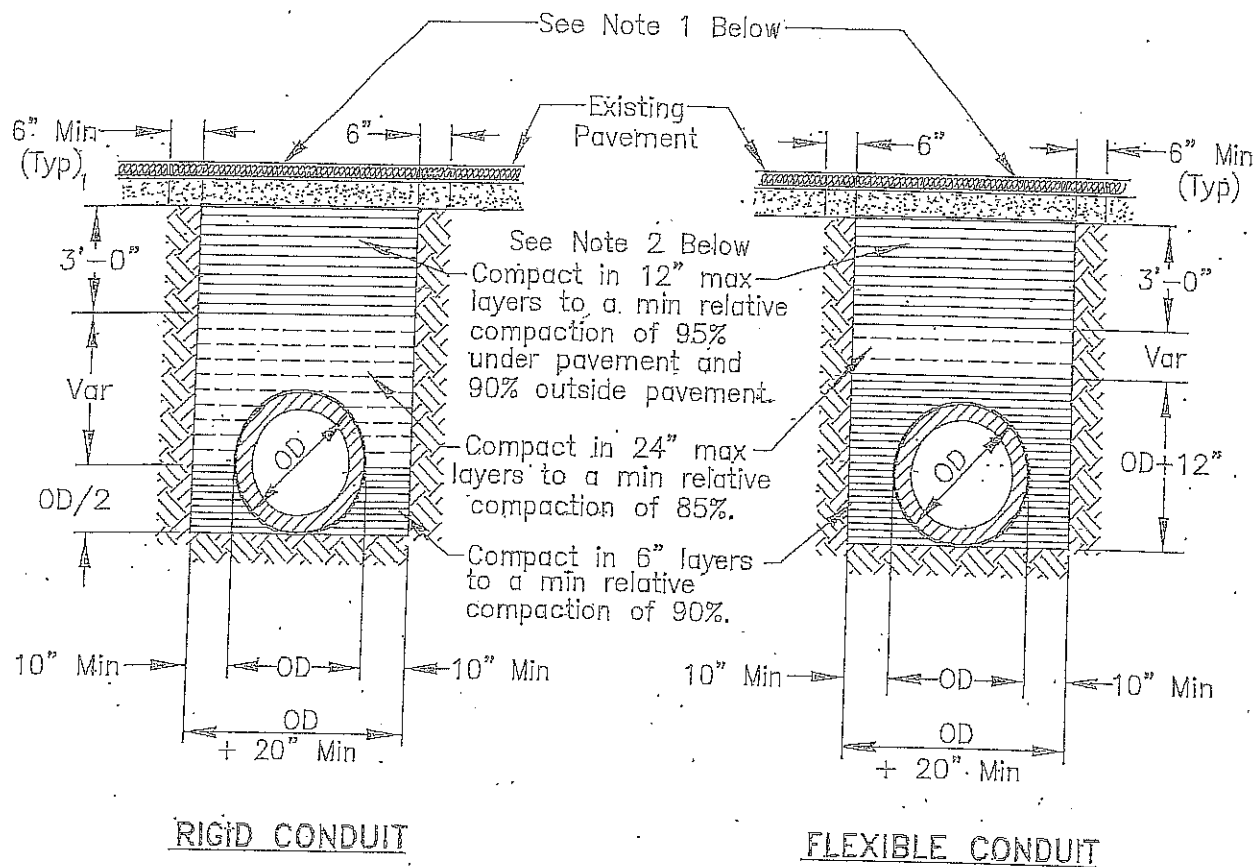
PROJECT: TRAFFIC CONTROL

FILE NAME: 802001A (3-10)

SCALE: N.T.S.

DATE: 05/29/17

REFERENCE MAP NUMBER: 29 OF 29



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. Grew

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 d. The local fire district
 - b. The County of San Joaquin Sheriff's Office e. The local school district
 - c. The local postal service 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, lampoles, 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.