

THUNDERBOLT WAY LOT EXPANSION

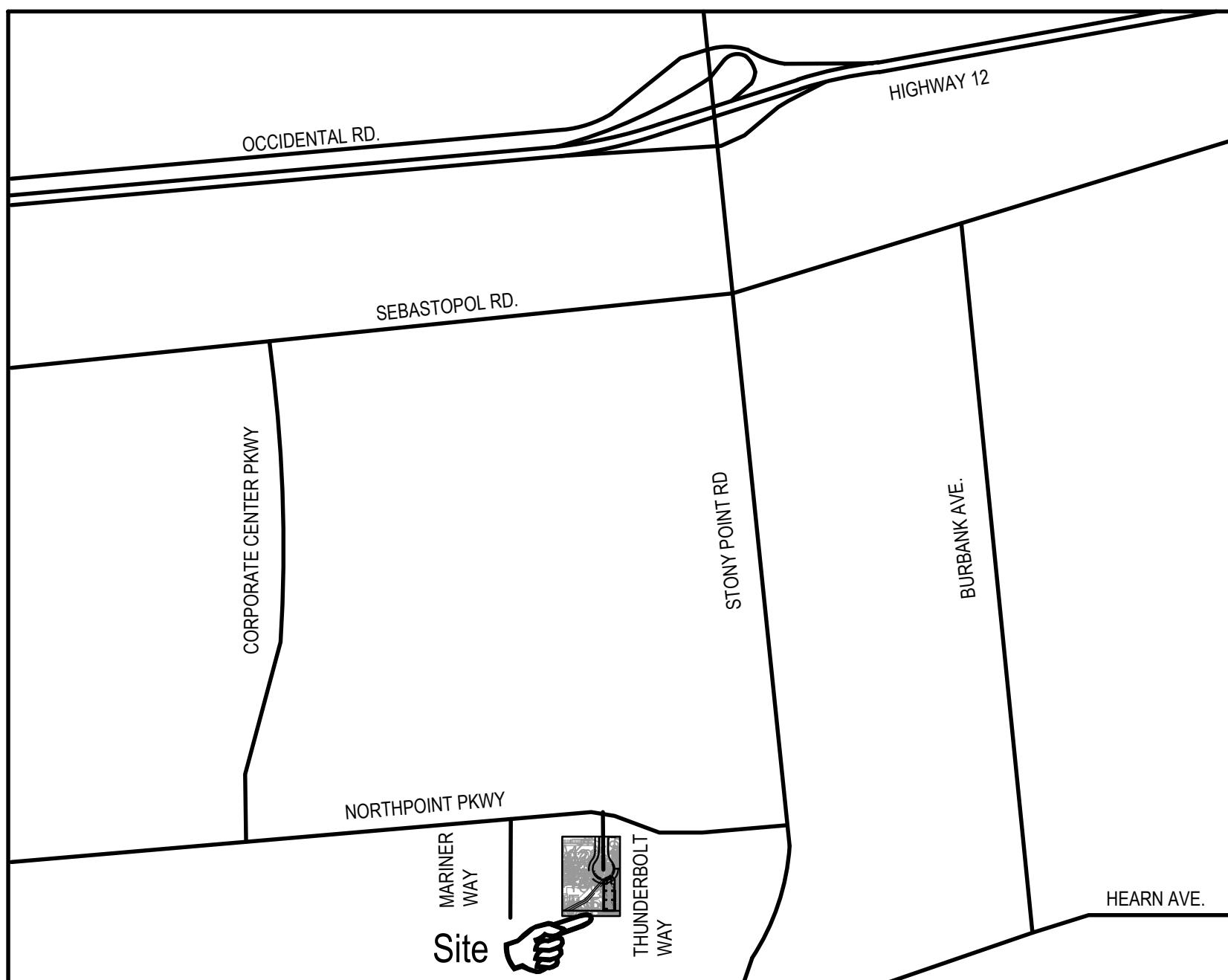
ON-SITE IMPROVEMENT PLANS

1405 THUNDERBOLT WAY
SANTA ROSA, CA 95407
APN: 035-530-049

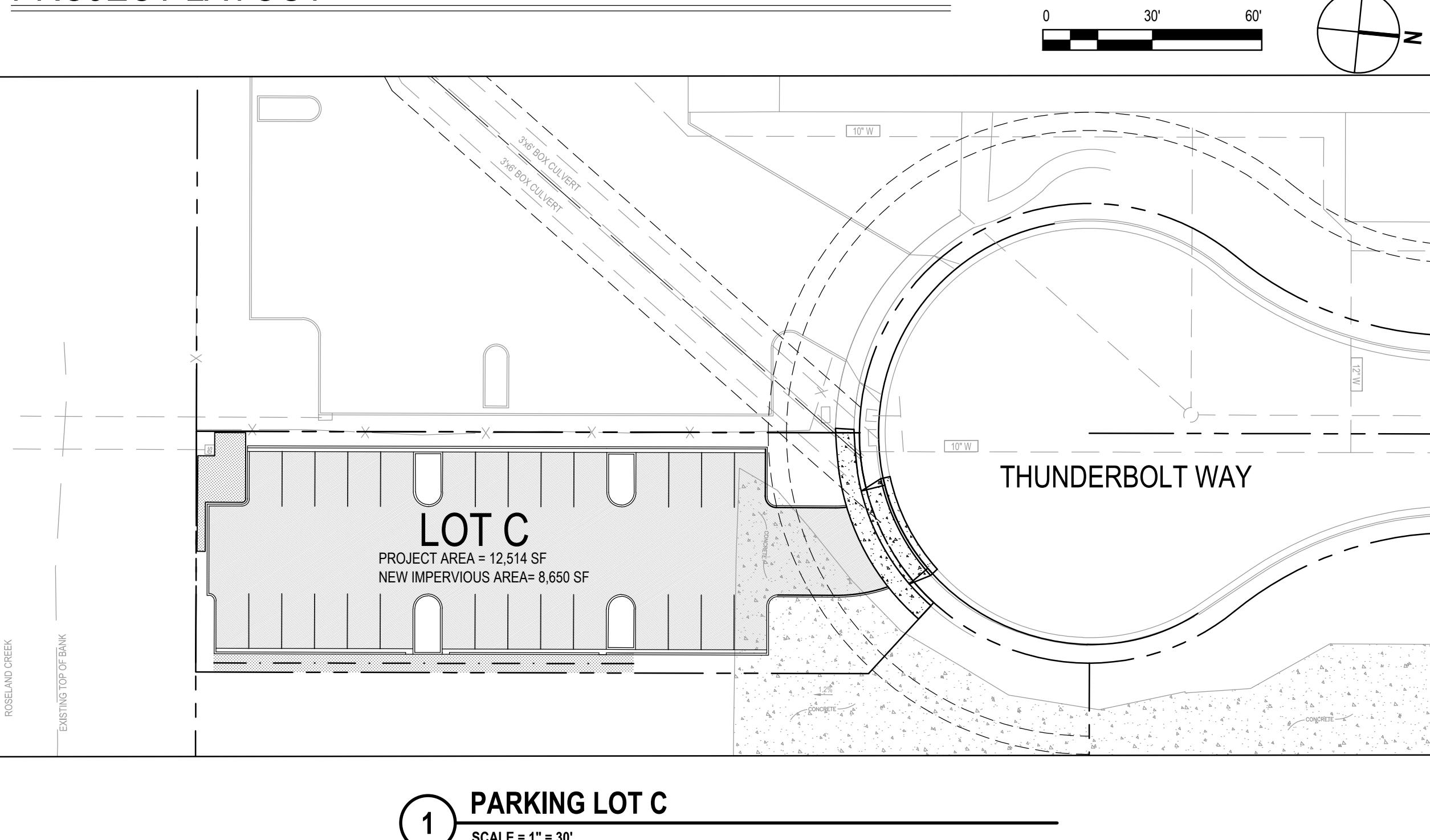


GHD Inc.
943 Reserve Dr #100
Roseville, CA 95678
T 1916782-8688 W www.ghd.com

VICINITY MAP - NTS



PROJECT LAYOUT

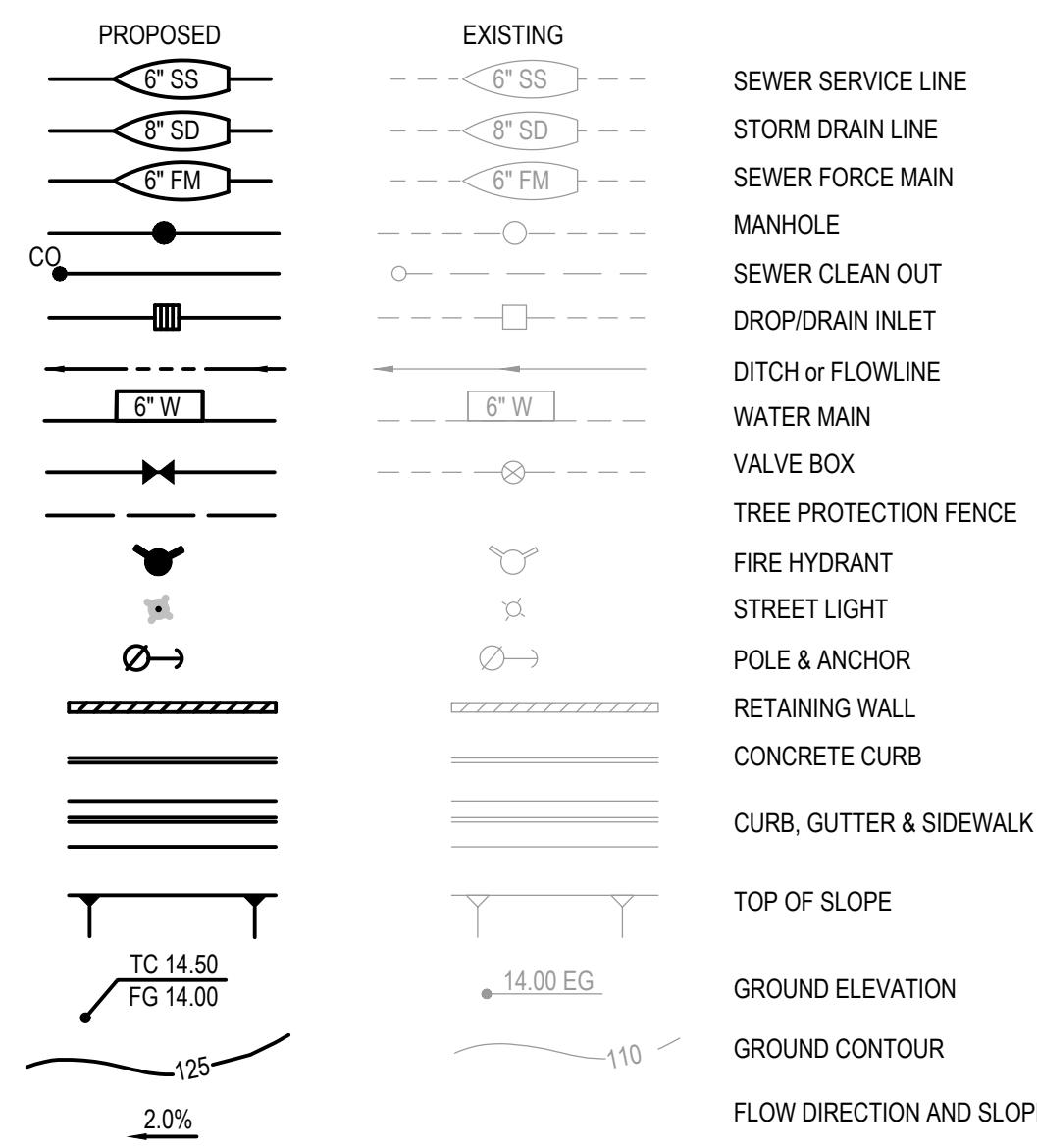


SHEET INDEX

1. G-001	COVER SHEET
2. C-100	SITE LOCATION MAP
3. C-101	SITE PLAN
4. C-102	GRADING PLAN
5. C-103	Typical Sections
6. L-100	LANDSCAPING PLAN
7. E-001	ELECTRICAL LEGEND, NOTES & ABBREVIATIONS
8. E-101	SITE PLAN LOT C
9. E-701	LOT-C PHOTOMETRICS

City of Santa Rosa
September 9/2020
Planning & Economic
Development Department

SYMBOLS



ABBREVIATIONS

#	NUMBER	FH	FIRE HYDRANT	SD	STORM DRAIN
AB	AGGREGATE BASE OR ACRE	FL	FLOWLINE	SD#	STANDARD DRAWING NUMBER
AC	ASPHALTIC CONCRETE	FP	FINISHED PAVEMENT	SDMH	STORM DRAIN MANHOLE
AHJ	AUTHORITY HAVING JURISDICTION	FS	FINISHED SURFACE	SP#	STANDARD PLAN NUMBER
APN	ASSESSORS PARCEL NUMBER	(F)	FUTURE	SS	SANITARY SEWER
ARV	AIR RELEASE VALVE	G	GAS	SSCO	SANITARY SEWER CLEAN OUT
BC	BEST CURVE	GB	GRADE BREAK	SSMM	SANITARY SEWER MANHOLE
BFP	BACKFLOW PREVENTER	GV	GATE VALVE	STA	STATION
BO	BLOW OFF	INTX	INTERSECTION	SUBD.	SUBDIVISION
BOW	BOTTOM OF WALL	INV	INVERT	SWPPP	STORM WATER POLLUTION PREVENTION PLAN
BVC	BEGIN VERTICAL CURVE	JT	JOIN TRENCH	T	TELEPHONE
BW	BACK OF WALL	LF	LINEAR FEET	TBW	TOP BACK OF WALK
CIG	CURB AND GUTTER	LT	LEFT	TC	TOP OF CURB
CH	CHORD	MAX	MATRIX	TOW	TOP OF WALL
CHL	CHORD LENGTH	MH	MANHOLE	TW	TOP OF WALK
CL	CENTERLINE	MIN	MINIMUM	(TYP)	(TYPICAL)
CMP	CORRUGATED METAL PIPE	NTS	NOT TO SCALE	V	VULT
CMU	CONCRETE MASONRY UNIT	OC	ON CENTER	VAR	VARIES
CO	CLEAN OUT	OH	OVERHEAD	VC	VERTICAL CURVE
CGSW	CURB, GUTTER & SIDEWALK	PCC	PORTLAND CEMENT CONCRETE	W	WATER
CONC	CONCRETE	PIV	POST INDICATOR VALVE	WM	WATER METER
CR	CURB RETURN	PL	PROPERTY LINE	WS	WATER SERVICE
DCV	DETECTOR CHECK VALVE	POC	POINT OF CONNECTION	WV	WATER VALVE
DI	DRAIN INLET	PP	POWER POLE		
DWY	DRIVEWAY	PRC	POINT OF REVERSE CURVE		
E	ELECTRICAL	PRVC	POINT OF REVERSE VERTICAL CURVE		
EC	END CURVE	PSE	PUBLIC SERVICE EASEMENT		
ELV	ELEVATION	PUE	PUBLIC UTILITIES EASEMENT		
EP	EDGE OF PAVEMENT	PVC	POLYVINYL CHLORIDE		
EVC	END VERTICAL CURVE	PVI	POINT VERTICAL INTERSECTION		
(E)	EXISTING	(P)	PROPOSED		
FD	FIRE DEPARTMENT	R	RADIUS		
FDC	FIRE DEPARTMENT CONNECTION	ROW	RIGHT OF WAY		
FF	FINISHED FLOOR	RC	REVERSE CURVE		
FFE	FINISHED FLOOR ELEVATION	RT	RIGHT		
FG	FINISHED GRADE	S#	SLOPE PERCENTAGE		

DESIGN CONCEPT NARRATIVE

THE PROJECT INCLUDES THE FOLLOWING:

- DEMOLITION OF SIDEWALK, CURB & GUTTER FOR PROPOSED DRIVEWAY.
- DEMOLITION OF THE EXISTING CONCRETE AIRSTRIP WITHIN PROJECT LIMITS.
- PROPOSED IMPROVEMENTS INCLUDE:
 - DRIVEWAY CUT
 - ASPHALT PAVEMENT
 - CONCRETE CURBS AND CURB & GUTTER
 - VEGETATED SWALE WITH UNDERDRAIN
- GRADING FOR THE PROPOSED IMPROVEMENTS
- STORM DRAINAGE INLET AND PIPING
- LANDSCAPE PLANTING AND IRRIGATION
- SITE LIGHTING AND ASSOCIATED ELECTRICAL EQUIPMENT

VIAVI
Client
VIAVI Solutions Inc.
6001 AMERICA CENTER DRIVE, 6TH FLOOR
SAN JOSE, CA 95002

Project
THUNDERBOLT WAY
PARKING LOT
IMPROVEMENTS

No.	Issue	Drawn	Approved	Date
Drawn	JSB / EER	Designer	JSB / EER	
Drafting Check	CSM	Design Check	CSM	
Project Manager	CSM	Date	9/3/2020	
This document shall not be used for construction unless signed and sealed for construction.		Scale		
Original Size	Bar is one inch on original size sheet			
Arch D	0			
Project No.				
Title				

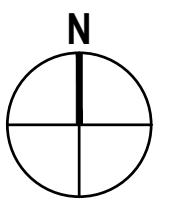
COVER SHEET

Sheet No.

G - 001

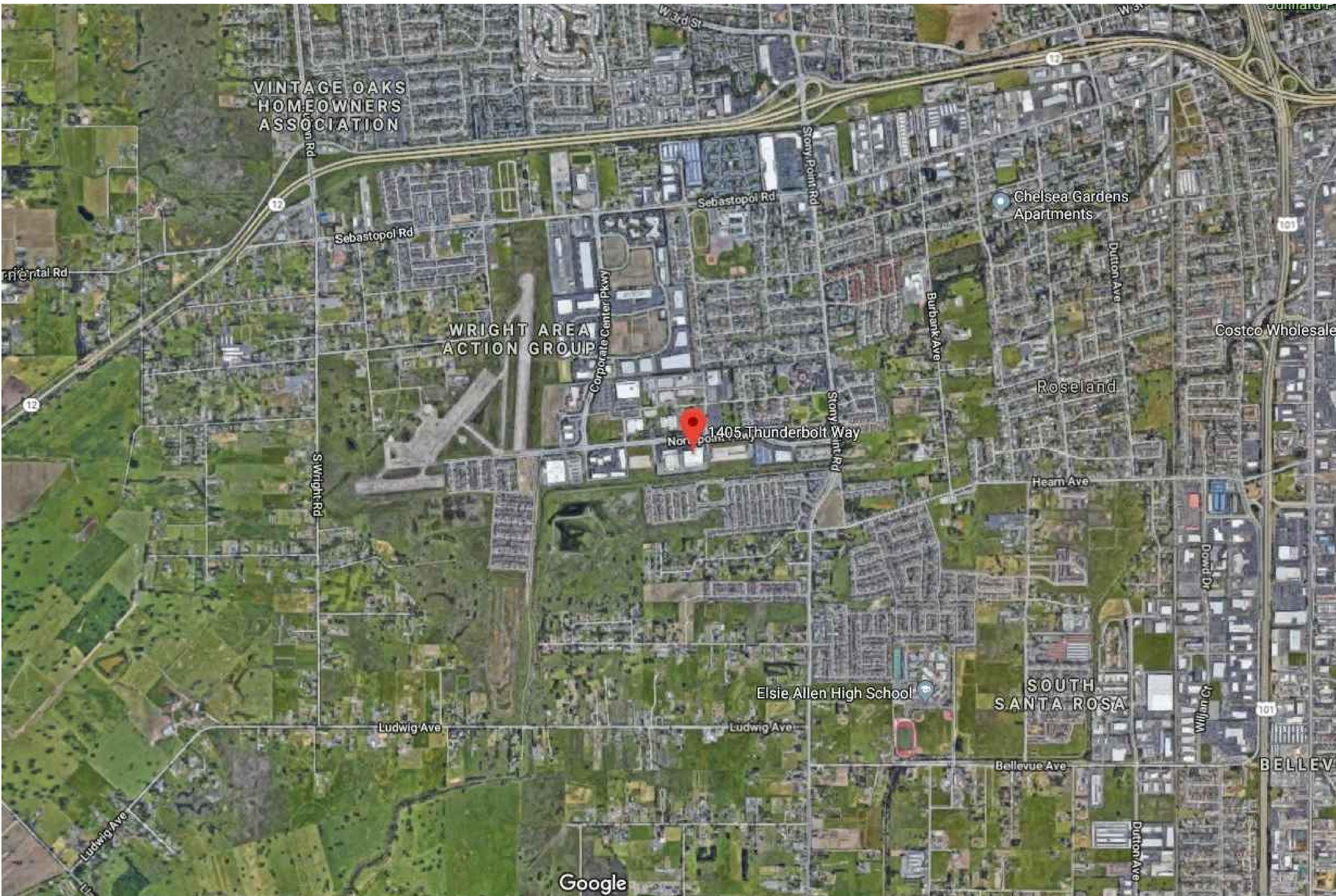
PRELIMINARY

Sheet 1 of 9



GHD Inc.
943 Reserve Dr #100
Roseville, CA 95678
T 1916782-8688 W www.ghd.com

Reuse of Documents
This document and the ideas and designs incorporated herein, as an instrument of professional service, is the property of GHD and shall not be reused in whole or in part for any other project without GHD's written authorization. © 2020 GHD



1 SITE LOCATION MAP - LOT C

SCALE = 1" = 10'

VIAVI

Client
VIAVI Solutions Inc.
6001 AMERICA CENTER DRIVE, 6TH FLOOR
SAN JOSE, CA 95002

Project
THUNDERBOLT WAY
PARKING LOT
IMPROVEMENTS

No.	Issue	Drawn	Approved	Date
Drawn	JSB / EER	Designer	JSB / EER	
Drafting Check	CSM	Design Check	CSM	
Project Manager	CSM	Date	9/3/2020	
This document shall not be used for construction unless signed and sealed for construction.		Scale		
Original Size	Arch D	Bar is one inch on original size sheet		
	0	1"		

Project No.

Title
SITE LOCATION
MAP

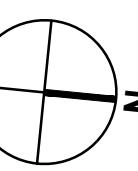
Sheet No.

C-100

PRELIMINARY

Sheet 2 of 9

0 10' 20' 40'



GHD Inc.
943 Reserve Dr #100
Roseville, CA 95678
T 1916782-8688 W www.ghd.com

Reuse of Documents
This document and the ideas and designs incorporated herein, as an instrument of professional service, is the property of GHD and shall not be reused in whole or in part for any other project without GHD's written authorization. © 2020 GHD

Client
VIAVI Solutions Inc.
6001 AMERICA CENTER DRIVE, 6TH FLOOR
SAN JOSE, CA 95002

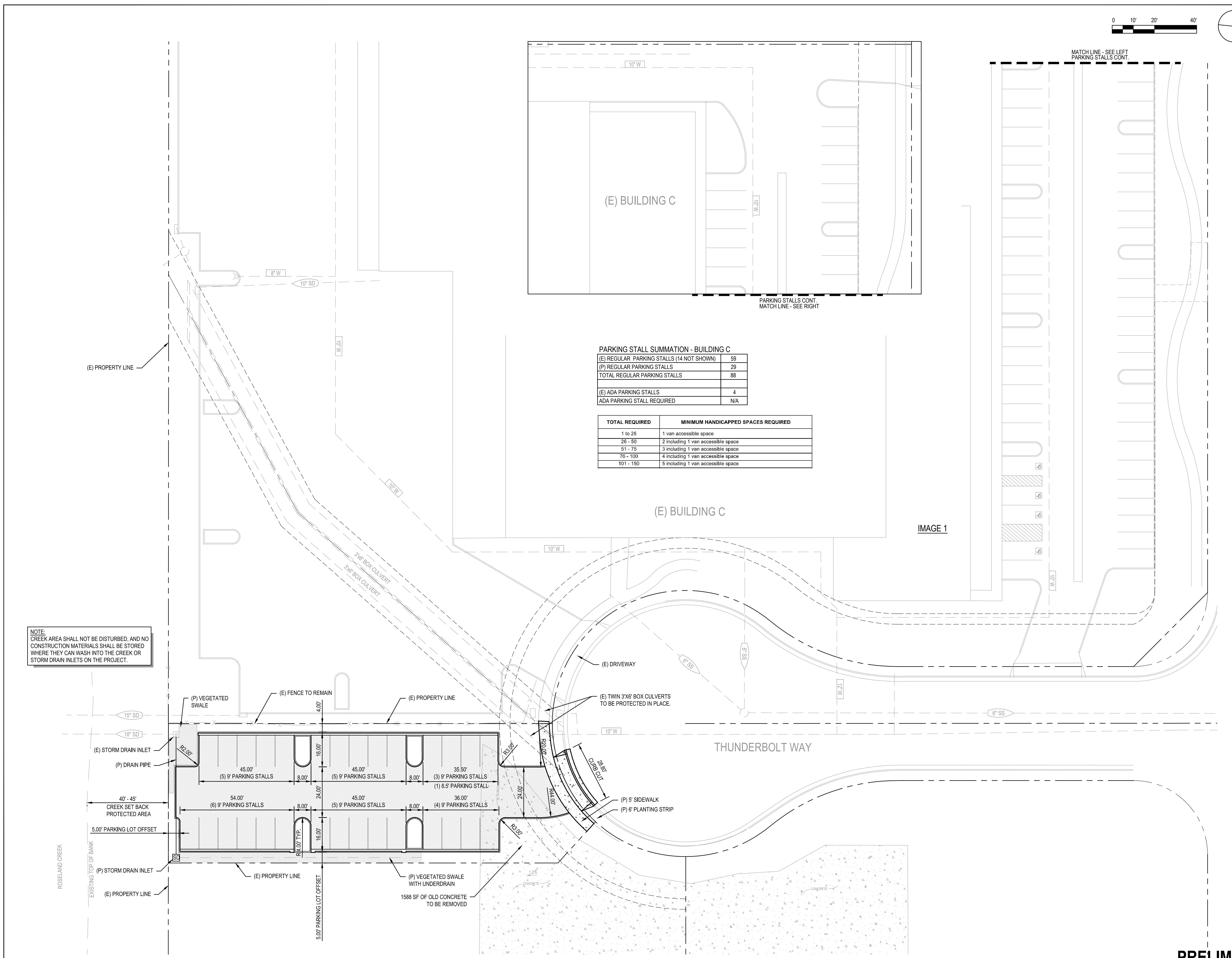
Project
THUNDERBOLT WAY
PARKING LOT
IMPROVEMENTS

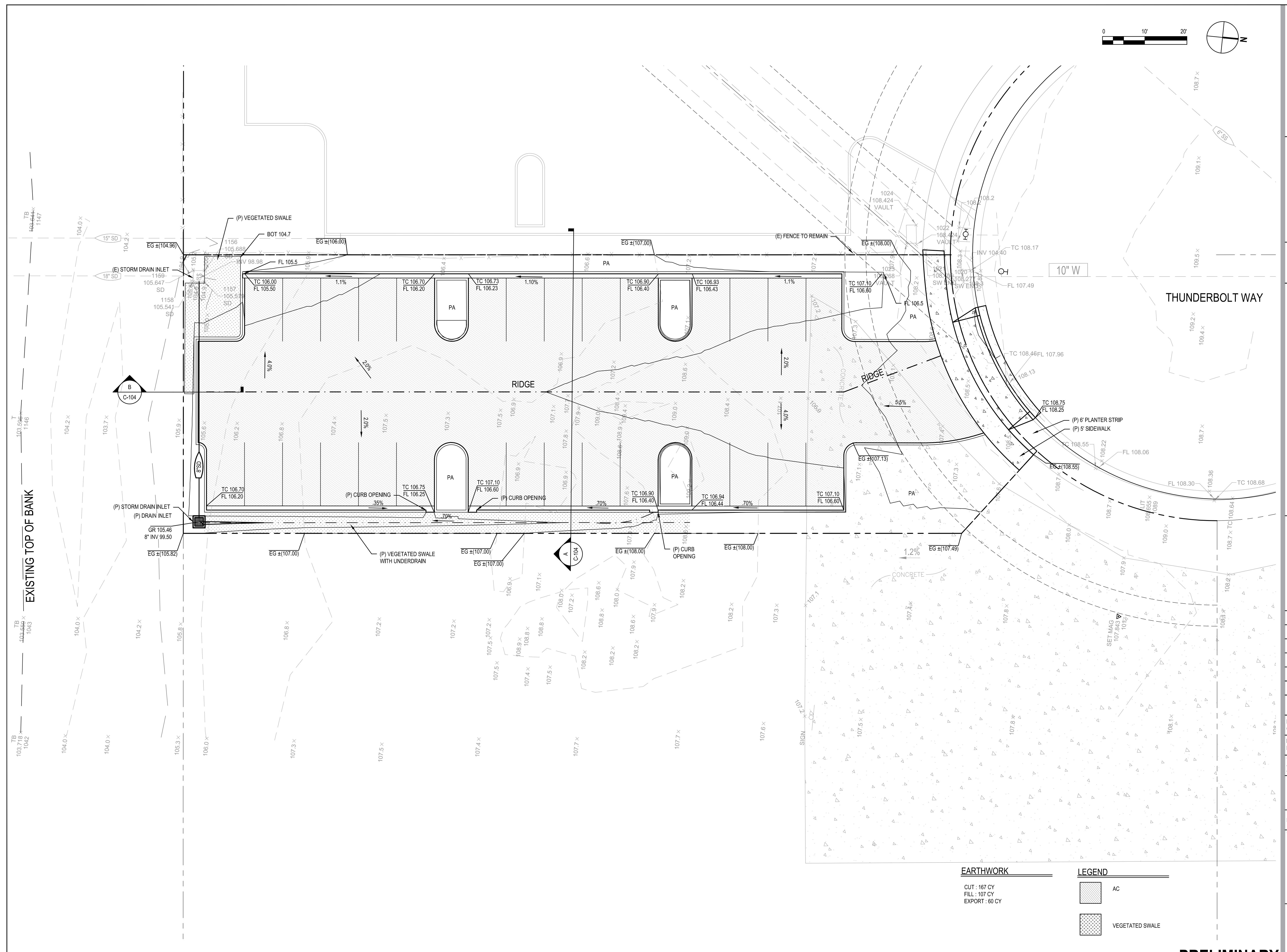
No.	Issue	Drawn	Approved
Drawn	JSB / EER	Designer	JSB / EER
Drafting Check	CSM	Design Check	CSM
Project Manager	CSM	Date	9/3/2020
This document shall not be used for construction unless signed and sealed for construction.		Scale	
Original Size	Bar is one inch on original size sheet		
Arch D	0	1"	
Project No.			
Title			
SITE PLAN			
Sheet No.			

C-101

PRELIMINARY

Sheet 3 of 9





GHD Inc.
943 Reserve Dr #100
Roseville, CA 95678
T 1 916782-8688 **W** www.ghd.com

Reuse of Documents
This document and the ideas and designs incorporated herein, as an instrument of professional service, is the property of GHD and shall not be reused in whole or in part for any other project without GHD's written authorization. © 2020 GHD

VIAVI

VIAVI Solutions Inc.
6001 AMERICA CENTER DRIVE, 6TH FLOOR
SAN JOSE, CA 95002

THUNDERBOLT WAY PARKING LOT IMPROVEMENTS

GRADING AND DRAINAGE PLAN

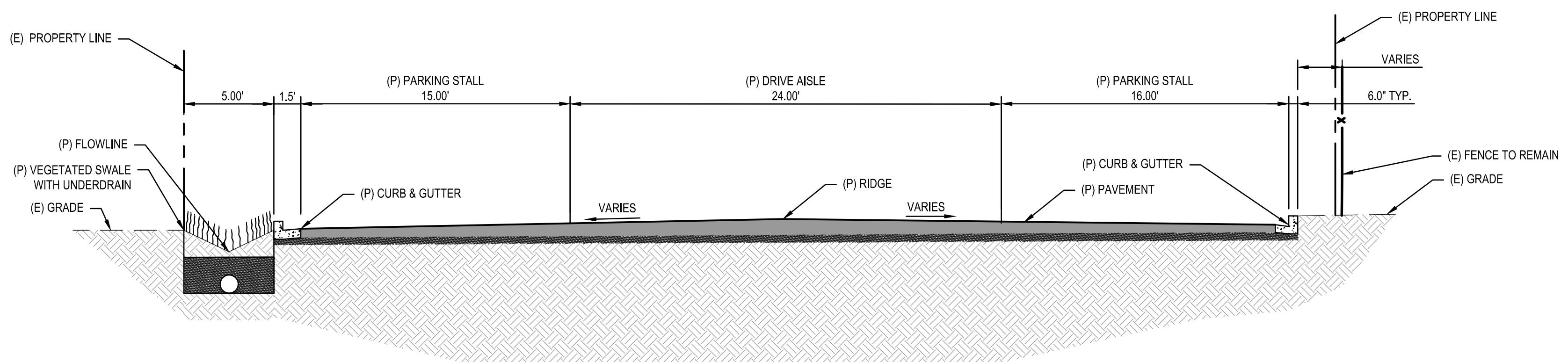
No.

PRELIMINARY



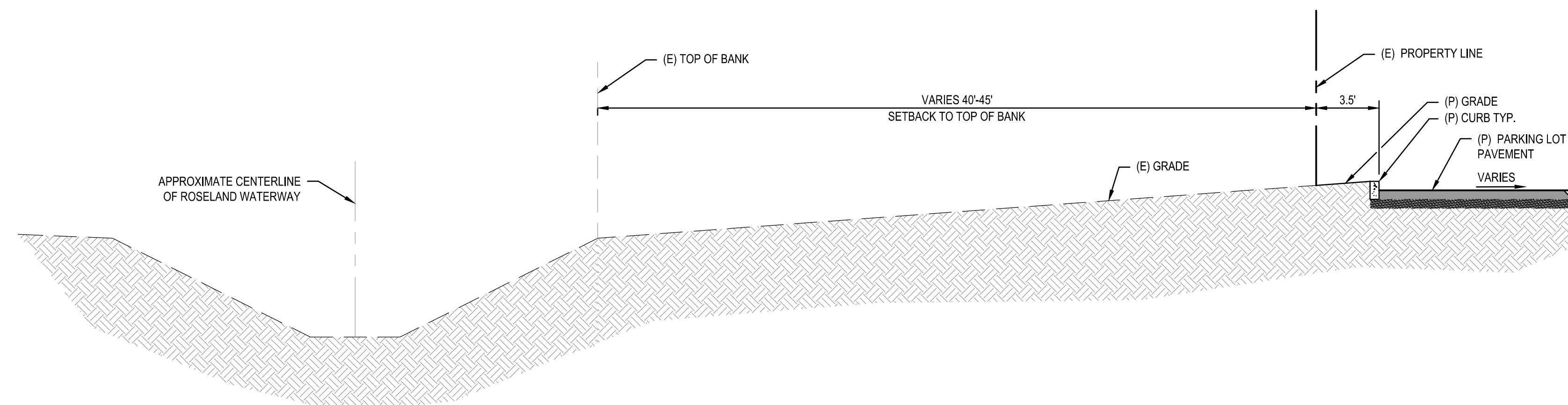
GHD Inc.
943 Reserve Dr #100
Roseville, CA 95678
T 1916782-8688 W www.ghd.com

Reuse of Documents
This document and the ideas and designs incorporated herein, as an instrument of professional service, is the property of GHD and shall not be reused in whole or in part for any other project without GHD's written authorization. © 2020 GHD



A PARKING LOT C - SECTION A

SCALE = NTS



B PARKING LOT C - SECTION B

SCALE = NTS

VIAVI

Client
VIAVI Solutions Inc.
6001 AMERICA CENTER DRIVE, 6TH FLOOR
SAN JOSE, CA 95002

Project
THUNDERBOLT WAY
PARKING LOT
IMPROVEMENTS

No.	Issue	Drawn	Approved	Date
Drawn	JSB / EER	Designer	JSB / EER	
Drafting Check	CSM	Design Check	CSM	
Project Manager	CSM	Date	9/3/2020	
This document shall not be used for construction unless signed and sealed for construction.	Scale			
Original Size	Bar is one inch on original size sheet			
Arch D	0			1"
Project No.				
Title				

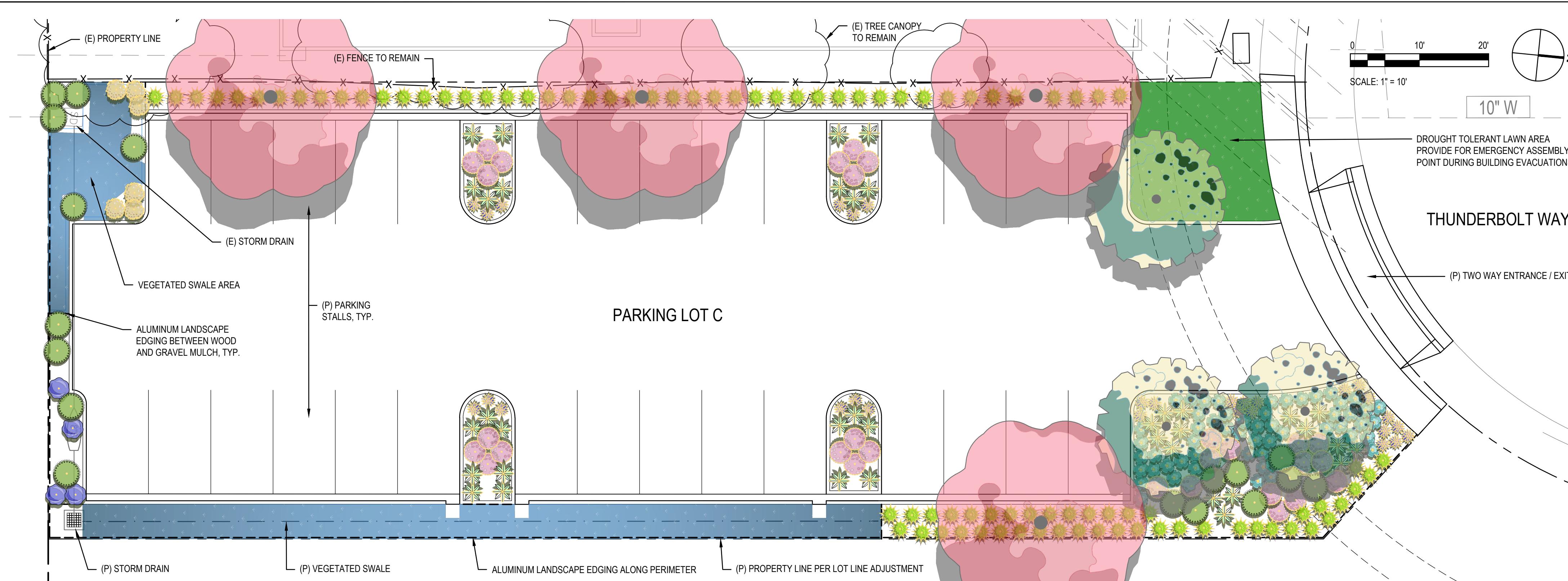
TYPICAL SECTIONS

Sheet No.

C - 103

PRELIMINARY

Sheet 5 of 9



LANDSCAPE DESIGN INTENT

1. DESIGN SHALL MEET THE STATE AND LOCAL REQUIREMENTS ASSOCIATED WITH IRRIGATION WATER USE THROUGH THE EXCLUSIVE USE OF LOW OR MEDIUM WATER USE PLANT MATERIALS AND LOW VOLUME DRIP-LINE OR ROTARY SPRAY IRRIGATION SYSTEM.
2. DESIGN IS INTENDED TO ENHANCE THE PROJECT THROUGH THE USE OF PLANT MATERIALS THAT PROVIDE YEAR ROUND TEXTURE, COLOR AND HARDINESS. NATIVES ARE USED WHERE APPROPRIATE.
3. VEGETATED SWALE SHALL HAVE A 2" LAYER OF GRAVEL MULCH, COBBLE MULCH (3"-6" IN SIZE) SHALL BE PLACED AS A SINGLE LAYER AT ALL CURB CUT LOCATIONS AND AS A 1" RING AROUND ALL DRAIN INLETS TO DISPERSE FLOWS AND PREVENT INLET CLOGGING. ALL OTHER PLANTING AREAS, EXCLUDING LAWN AREAS, SHALL HAVE A 3" DEEP LAYER OF WOOD MULCH SPREAD EVENLY ACROSS ENTIRE PLANTING AREA.

DESIGN NOTES

1. PLANT CONTAINER SIZES:
 - TREES TO BE PLANTED FROM 24" BOX SIZE CONTAINERS
 - SHRUBS TO BE PLANTED FROM 5-GALLON AND 1-GALLON CONTAINERS
 - GROUND COVERS TO BE PLANTED FROM 1-GALLON CONTAINERS
2. ALUMINUM EDGING SHALL BE INSTALLED BETWEEN WOOD, GRAVEL MULCH, COBBLE MULCH, AND LAWN.
3. SEE BELOW FOR PLANT LEGEND AND IMAGES OF PROPOSED PLANT MATERIAL.

CALGREEN+TIER 1 CHECKLIST

THE DESIGN OF THE LANDSCAPE / IRRIGATION SYSTEM IS INTENDED TO MEET THE CALGREEN+TIER 1 CHECKLIST ASSOCIATED WITH LANDSCAPE ELEMENTS. TOWARD THIS END THE PROJECT WILL INCLUDE THE FOLLOWING BEST PRACTICES:

1. HYDROZONE IRRIGATION TECHNIQUES WILL BE INCORPORATED.
2. THE PLANT PALETTE WILL UTILIZE AT LEAST 75% NATIVE CALIFORNIA OR DROUGHT TOLERANT PLANT MATERIALS APPROPRIATE TO THE CLIMATE ZONE REGION.
3. THE USE OF POTABLE WATER WILL BE RESTRICTED TO A QUANTITY THAT DOES NOT EXCEED 65% OF ETO TIMES THE LANDSCAPE AREA.
4. COMMON AREA AND PERIMETER AREA LANDSCAPE IRRIGATION WILL CONSIST OF A LOW VOLUME DRIP OR ROTARY SYSTEM.
5. ALL IRRIGATION VALVES SHALL BE CONNECTED TO AN AUTOMATIC CONTROL SYSTEM.
6. ALL IRRIGATION SYSTEMS SHALL BE DESIGNED TO MEET THE MOST CURRENT WATER CONSERVATION POLICIES AND AVAILABLE EQUIPMENT.

SANTA ROSA CITY MUNICIPAL CODE - Section 20-34.050(G.2.e) - Tree Requirement
PER CITY CODE, THE DESIGN MEETS THE PARKING AREA TREE REQUIREMENTS OF ONE TREE FOR EACH FIVE PARKING SPACES (29 PARKING SPACES = 6 TREES).



GHD Inc.

Reuse of Documents
This document and the ideas and designs incorporated herein, as an instrument of professional service, is the property of GHD and shall not be reused in whole or in part for any other project without GHD's written authorization. © 2020 GHD

VIAVI

Client
VIAVI Solutions Inc.
6001 AMERICA CENTER DRIVE, 6TH FLOOR
SAN JOSE, CA 95002

Project
THUNDERBOLT WAY
PARKING LOT
IMPROVEMENTS

No.	Issue	Drawn	Approved	Date
Drawn				Designer
Drafting Check				Design Check
Project Manager				Date 9/3/2020
This document shall not be used for construction unless signed and sealed for construction.				Scale

Original Size	Bar is one inch on original size sheet
Arch D	0 1"
Project No.	

PRELIMINARY LANDSCAPE PLAN

Sheet No.

L - 100

Sheet of XX

PRELIMINARY

PLANT SCHEDULE THUNDERBOLT WAY - LOT C

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT
	LAG N40	3	Lagerstroemia indica x fauriei 'Natchez'	Natchez Crape Myrtle	24" Box
	PK	4	Pistacia chinensis 'Keith Davey'	Keith Davey Chinese Pistache	24" Box
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT
	AO	29	Agapanthus orientalis 'BLUE'	Blue' Lily of the Nile	5 gal
	DB2	37	Dietes bicolor	Fortnight Lily	5 gal
	LAV ANG	54	Lavandula angustifolia 'Essence Purple'	English Lavender	5 gal
	LB	89	Lomandra longifolia 'Breeze'	Dwarf Mat Rush Breeze	1 gal
	LUP ALB	4	Lupinus albifrons	Bush Lupine	5 gal
	MIM AUR	6	Mimulus aurantiacus	Sticky Monkey Flower	5 gal
	MR	17	Muhlenbergia rigens	Deer Grass	5 gal
	RB	29	Rhaphiolepis indica 'Pink Dancer'	Pink Dancer Hawthorne	5 gal
GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT
	SOD BOL	395 sf	'Bolero Plus' Turf Sod	By Delta BlueGrass	Sod
	JE2	203	Juncus patens 'Elk Blue'	Spreading Rush	1 GAL

MULCH SCHEDULE THUNDERBOLT WAY - LOT C

SYMBOL	DESCRIPTION	QTY
NOT SHOWN	Gravel Mulch	5.31 cy
NOT SHOWN	Wood Mulch	18.55 cy
NOT SHOWN	Cobble Mulch	0.59 cy

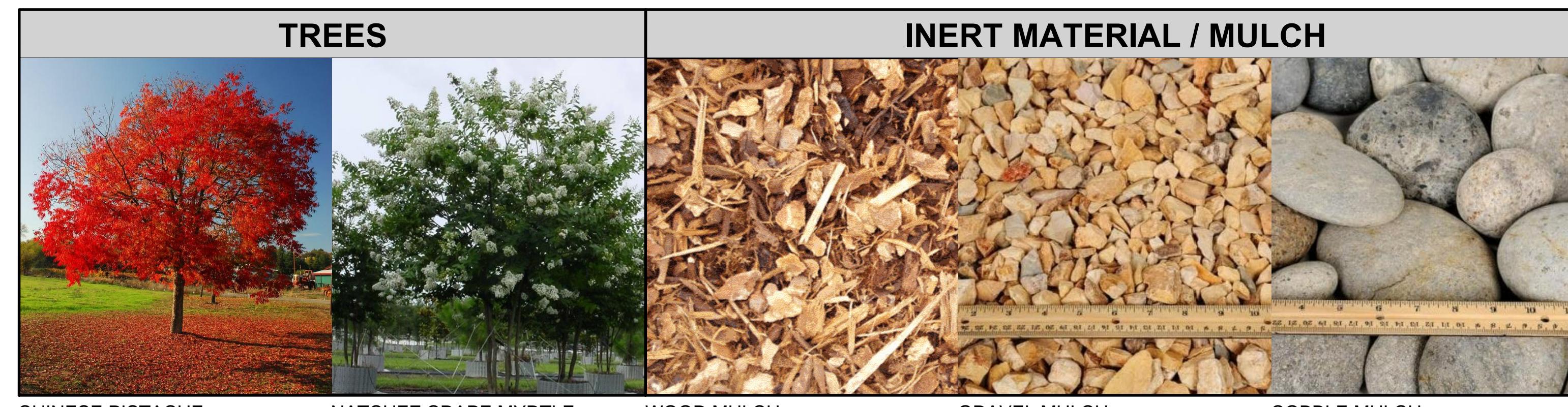
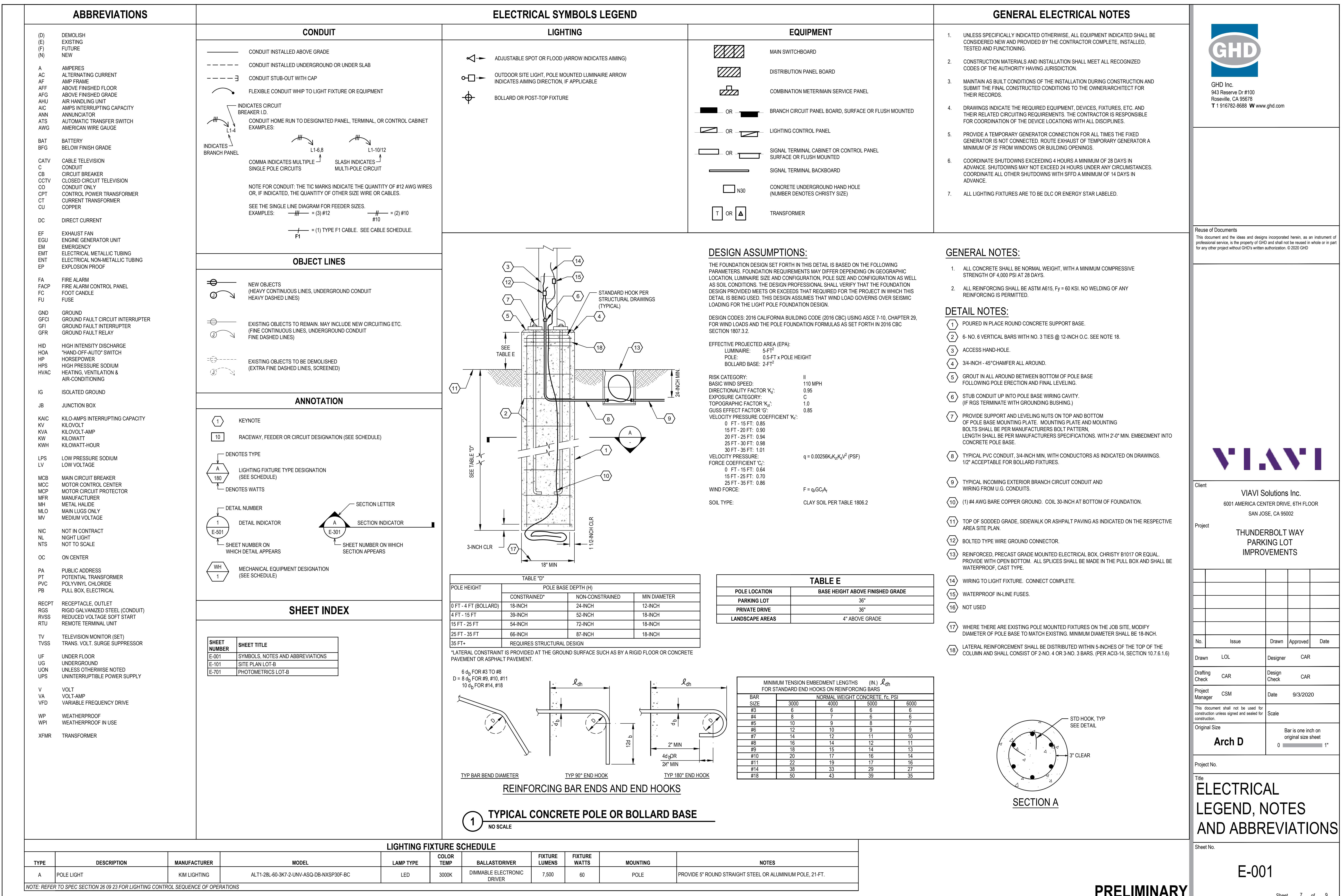
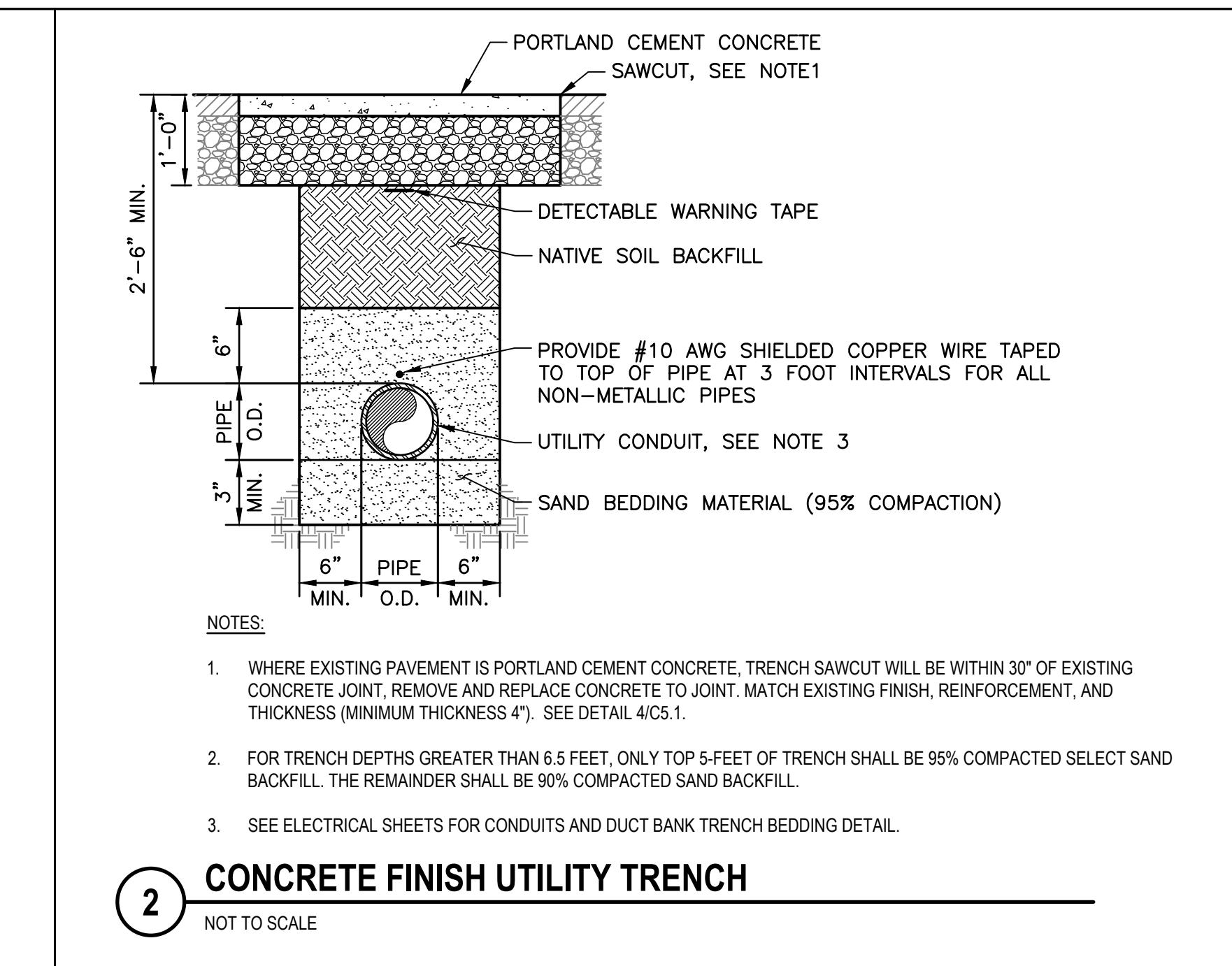
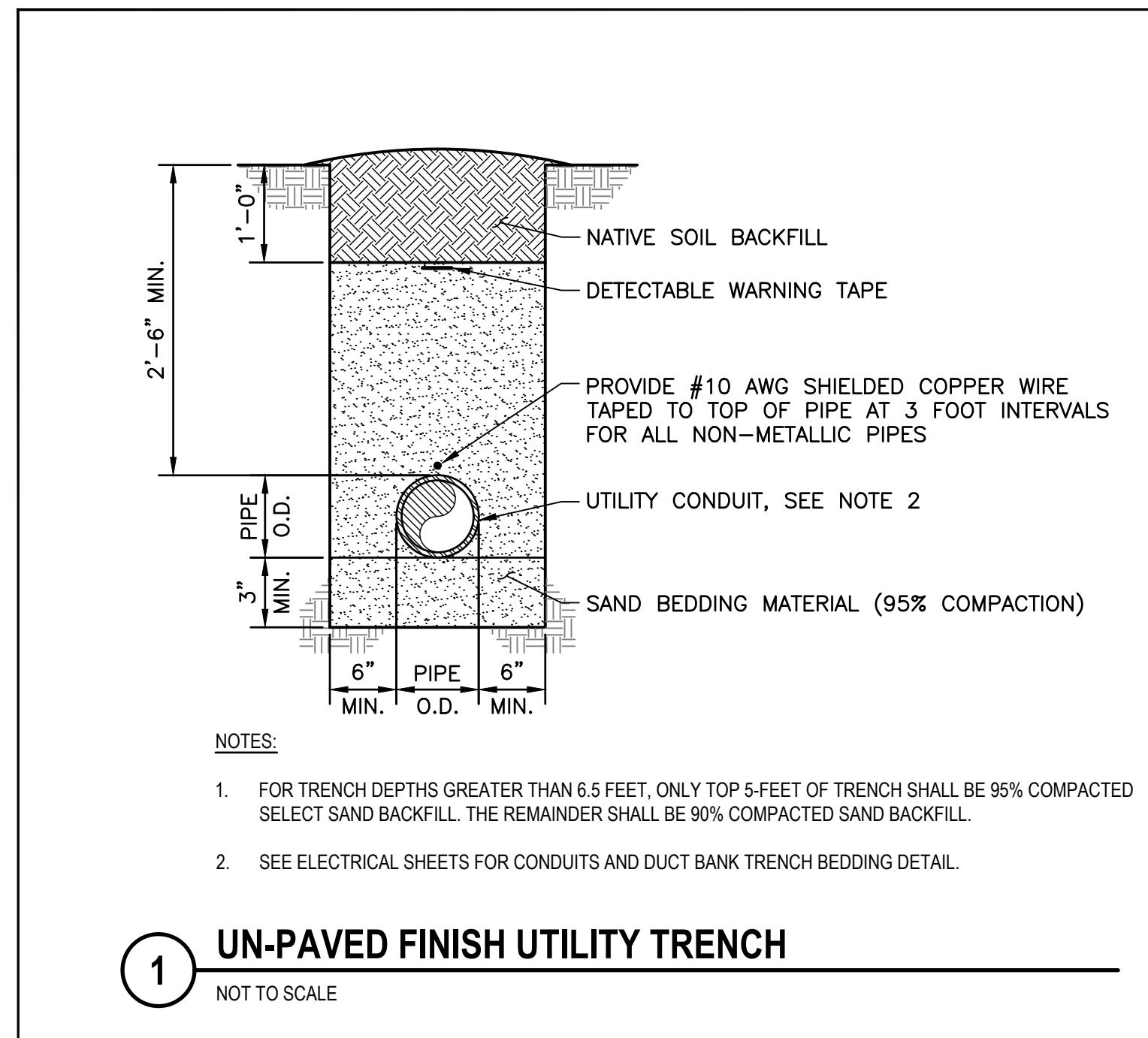


IMAGE NOTES

THESE IMAGES (COMMON NAMES INDICATED) REFLECT THE GENERAL CHARACTER OF THE PLANT MATERIALS TENTATIVELY PROPOSED ON PLANT PALETTE.



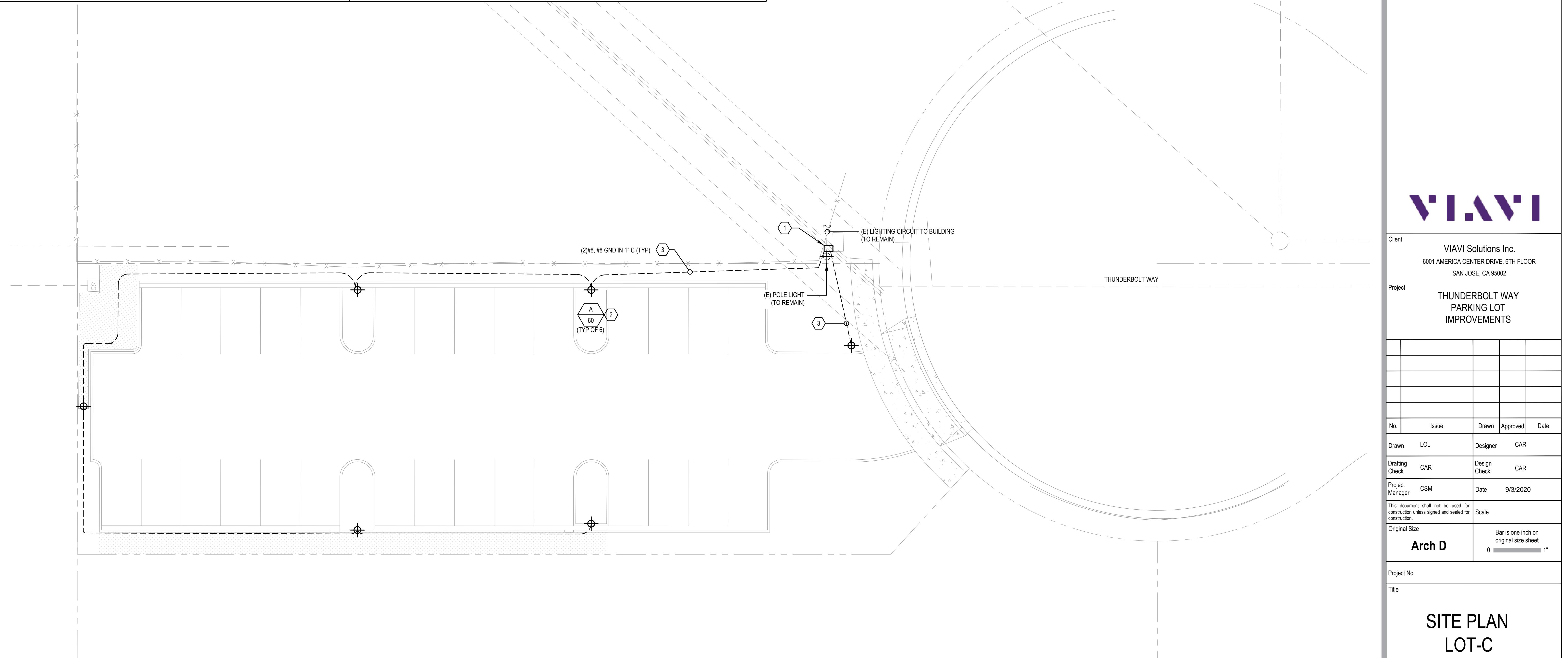
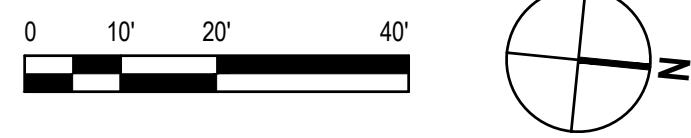


SHEET KEYNOTES	
1.	PROVIDE PULLBOX, CHRISTY B1017 WITH BASE AND COVER OR EQUAL. INTERCEPT (E) LIGHTING POWER CONDUIT.
2.	PROVIDE AREA LIGHT FIXTURE COMPLETE WITH POLE, CONCRETE POLE BASE, AND MOUNTING ACCESSORIES AS REQUIRED.
3.	PROVIDE LIGHTING FEEDER AS INDICATED AND EXTEND LIGHTING POWER CIRCUIT TO AREA LIGHTING.



GHD Inc.
943 Reserve Dr #100
Roseville, CA 95678
T 191678-8688 W www.ghd.com

Reuse of Documents
This document and the ideas and designs incorporated herein, as an instrument of professional service, is the property of GHD and shall not be reused in whole or in part for any other project without GHD's written authorization. © 2020 GHD

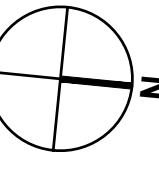


PRELIMINARY

Sheet 8 of 9



GHD Inc.
943 Reserve Dr #100
Roseville, CA 95678
T 1916782-8688 W www.ghd.com



Reuse of Documents
This document and the ideas and designs incorporated herein, as an instrument of professional service, is the property of GHD and shall not be reused in whole or in part for any other project without GHD's written authorization. © 2020 GHD

VIAVI

Client
VIAVI Solutions Inc.
6001 AMERICA CENTER DRIVE, 6TH FLOOR
SAN JOSE, CA 95002

Project
THUNDERBOLT WAY
PARKING LOT
IMPROVEMENTS

No.	Issue	Drawn	Approved	Date
Drawn	LOL	Designer	CAR	
Drafting Check	CAR	Design Check	CAR	
Project Manager	CSM	Date	9/3/2020	
This document shall not be used for construction unless signed and sealed for construction.		Scale		
Original Size	Arch D	Bar is one inch on original size sheet		

Arch D
Bar is one inch on original size sheet
0 1"

Project No.

Title

PHOTOMETRICS
LOT-C

Sheet No.

E-701

Sheet 9 of 9

PRELIMINARY

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Avg/Min
Thunderbolt Lot-C	Illuminance	Fc	2.41	3.5	0.8	3.01 4.38

