

41ST AVENUE ADAPTIVE SYSTEM

PREPARED FOR CITY OF CAPITOLA


PROJECT DESCRIPTION

INSTALL AN ADAPTIVE TRAFFIC SIGNAL SYSTEM ALONG 41ST AVENUE BETWEEN CLARES STREET AND BROMMER STREET/JADE STREET.

CONTACTS

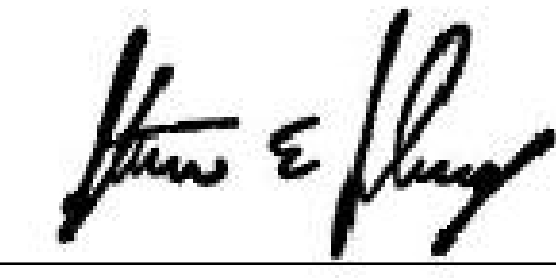
- CIVIL ENGINEER**
 KIMLEY-HORN AND ASSOCIATES, INC.
 1300 CLAY STREET, SUITE 325
 OAKLAND, CA 94612
 TEL: (510) 625-0712
 CONTACT: KWASI AKWABI, P.E.
- CITY ENGINEER**
 CITY OF CAPITOLA PUBLIC WORKS DEPARTMENT
 420 CAPITOLA AVENUE
 CAPITOLA, CA 95010
 TEL: (831) 475-7300
 CONTACT: STEVE JESBERG

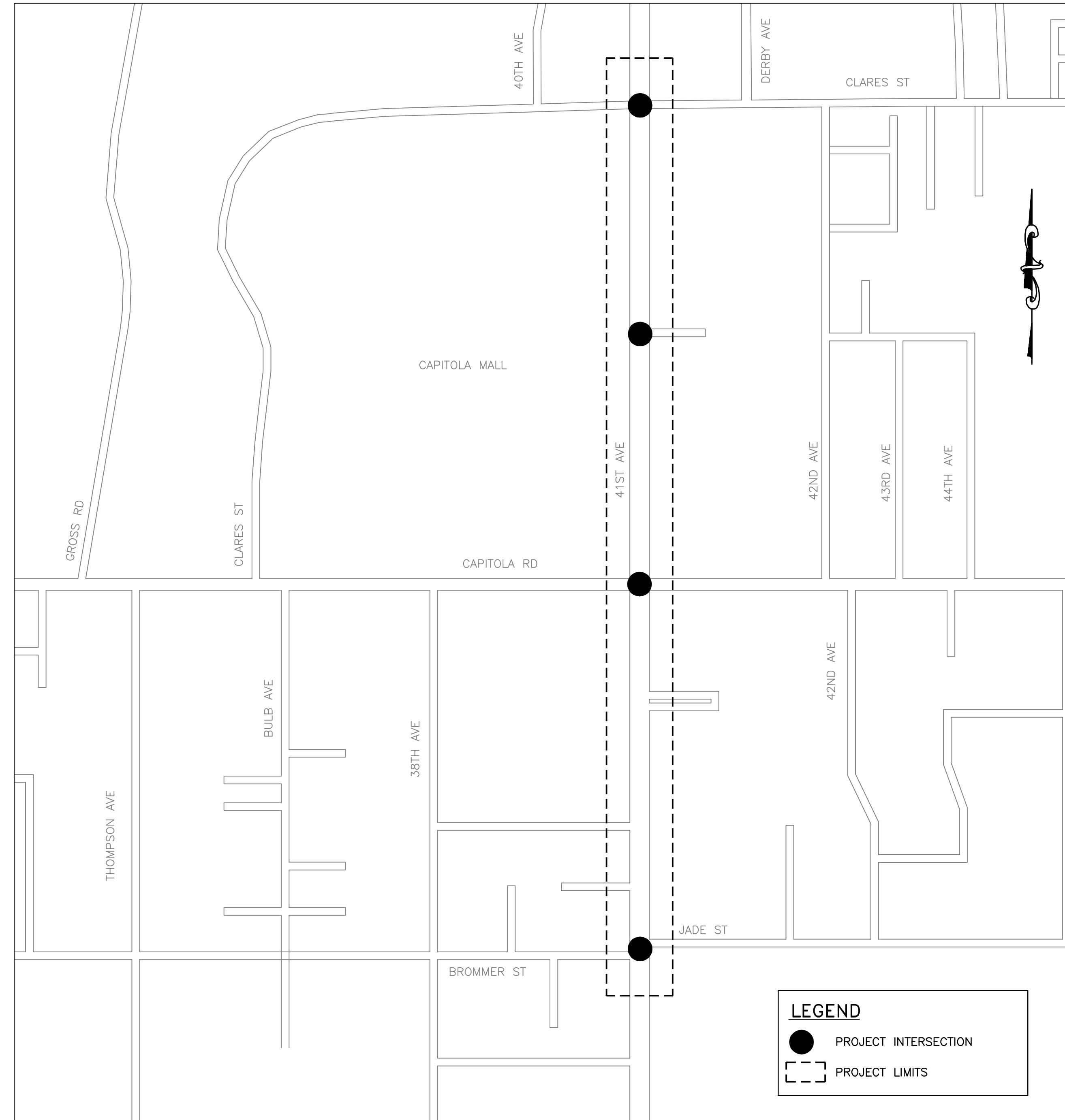
SUBMITTED BY:

 1/11/2017
 KWASI AKWABI, P.E. DATE

ACCEPTANCE OF PLANS

THE CITY OF CAPITOLA HEREBY ACCEPTS THESE PLANS FOR CONSTRUCTION, AS BEING IN GENERAL COMPLIANCE WITH PLANS PREPARATION REQUIREMENTS OF THIS GOVERNMENT. RESPONSIBILITY FOR THE COMPLETENESS AND ACCURACY OF THE PLANS AND RELATED DESIGN RESIDES WITH THE ENGINEER AND ENGINEERING FIRM OF RECORD.

 1/11/2017
 STEVE JESBERG P.E. DATE
 DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
 CITY OF CAPITOLA



VICINITY MAP
NTS

LEGEND

- PROJECT INTERSECTION
- PROJECT LIMITS

SHEET INDEX

1	CV01	COVER SHEET
2	GN01	GENERAL NOTES
3	KM01	KEY MAP
4	SY01	SYSTEM DIAGRAM
5	TS01	41ST AVE AND JADE ST
6	TS02	41ST AVE AND CAPITOLA RD
7	TS03	41ST AVE AND CAPITOLA MALL ENTRANCE
8	TS04	41ST AVE AND CLARES ST
9	EQ01	EQUIPMENT SUMMARY
10	DT01	DETAILS
11	DT02	DETAILS

ABBREVIATIONS

GRS	GALVANIZED RIGID STEEL
HDPE	HIGH-DENSITY POLYETHYLENE
IP	INTERNET PROTOCOL
MIN.	MINIMUM
MMU	MAJORITY MANAGEMENT UNIT
NTS	NOT TO SCALE
PVC	POLYVINYL CHLORIDE

LEGEND

PROPOSED	EXISTING	
---	---	CONDUIT
---	---	FACE OF CURB
---	---	LIP OF GUTTER
---	---	BACK OF CURB
---	---	BACK OF SIDEWALK
---	---	RIGHT-OF-WAY
X	X	FENCE
SS	SS	SANITARY SEWER LINE AND MANHOLE
SD	SD	STORM SEWER LINE AND MANHOLE
W	W	WATER LINE
N2	N2	NITROGEN GAS LINE
E	E	ELECTRICAL LINE
G	G	GAS LINE
T	T	TELEPHONE LINE
FO	FO	FIBER OPTIC LINE
TC	TC	TRAFFIC SIGNAL CONTROLLER CABINET
SC	SC	SERVICE CABINET
TH	TH	TRAFFIC SIGNAL HEAD
PB	PB	PULL BOX
TS	TS	TRAFFIC SIGNAL STANDARD
ED	ED	EVP/TSP OPTICAL DETECTOR UNIT
UP	UP	UTILITY POLE
FH	FH	FIRE HYDRANT
TL	TL	TELEPHONE MANHOLE
WV	WV	WATER VALVE
MAS	MAS	MAST ARM MOUNTED SIGN
LD	LD	TYPE A LOOP DETECTOR
IC	IC	InSync 360° IP MONITORING CAMERA
IC	IC	InSync IP DETECTION CAMERA
IC	IC	VIDEO DETECTION CAMERA
IC	IC	VIDEO DETECTION ZONE

REFERENCES

- 2010 CALTRANS STANDARD PLANS

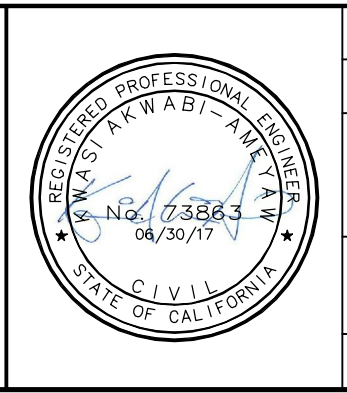


Plotted By: Rainey, Shawn | Sheet Set: KHA - Layout: I CV01 January 12, 2017 08:15:39am | K:\OAK\JTS\097763118 - Capitola 41st Avenue Adaptive System - KGA\CADD\Plan Sheets\ CV01.dwg | This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

No.	REVISIONS	DATE	BY

Kimley»Horn

© 2016 KIMLEY-HORN AND ASSOCIATES, INC.
 1300 CLAY STREET, SUITE 325, OAKLAND, CA 94612
 PHONE: 510-350-0217
 WWW.KIMLEY-HORN.COM



DESIGNED BY	DRAWN BY	CHECKED BY
JCS	SAR	KA
PLANS PREPARED UNDER SUPERVISION OF:		
KWASI AKWABI-AMEYAW REGISTERED CIVIL ENGINEER		
06/30/2017	73863	
DATE	RCE NO.	

**41ST AVENUE
ADAPTIVE SYSTEM**

PREPARED FOR
CITY OF CAPITOLA

COVER SHEET

DRAWING NO	CV01
SHEET	1 of 11
JOB No.	097763118

GENERAL NOTES

1. THESE PLANS ARE HEREBY MADE PART OF THE CONTRACT SPECIFICATIONS FOR THIS PROJECT. THESE PLANS SHALL BE ACCOMPANIED BY SEPARATE SET OF SPECIAL PROVISIONS. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK CALLED FOR ON THESE PLANS UNTIL THE CITY ENGINEER'S SIGNATURE OF APPROVAL IS AFFIXED HEREON AND ALL APPLICABLE PERMITS HAVE BEEN OBTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND LICENSES REQUIRED TO COMPLETE THE PROJECT. AN APPROVED SET OF PLANS SHALL BE ON THE JOB SITE DURING ANY CONSTRUCTION.
2. ALL WORK AND MATERIAL EMBRACED IN THIS PROJECT SHALL BE DONE IN ACCORDANCE WITH APPLICABLE PROVISIONS OF THE CITY OF CAPITOLA, DEPT. OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND PLANS, THE LATEST EDITIONS OF CALTRANS STANDARD PLANS AND SPECIFICATIONS, AND IN ACCORDANCE WITH THE SPECIAL PROVISIONS OF THIS PROJECT.
3. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
4. THE CONTRACTOR SHALL MAKE AN ON-SITE INSPECTION PRIOR TO PROVIDING ANY BIDS TO DETERMINE ANY AND ALL ITEMS NECESSARY TO PERFORM A COMPLETE AND ACCEPTABLE JOB.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPORTING ALL CONFLICTS, ERRORS, OMISSIONS, ETC. TO THE ENGINEER IMMEDIATELY UPON DISCOVERY. IF SO DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL STOP WORK UNTIL REMEDIAL ACTION CAN BE TAKEN. ANY COSTS RESULTING FROM THE CONTRACTOR'S FAILURE TO REPORT OR FAILURE TO STOP WORK, AS DIRECTED, WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
6. THE CONTRACTOR SHALL CONTACT THE CITY OF CAPITOLA PUBLIC WORKS DEPARTMENT FOR A PRE-CONSTRUCTION CONFERENCE AFTER THE AWARD OF CONTRACT AND AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY PG&E AND OTHER UTILITY COMPANIES PRIOR TO START OF WORK. THE CONTRACTOR SHALL CALL USA (811) 48 HOURS PRIOR TO ANY EXCAVATION.
8. THE CONTRACTOR SHALL, BY HAND, POTHOLE EXISTING UTILITIES TO VERIFY LOCATION PRIOR TO CONSTRUCTION.
9. EXISTING UTILITIES INCLUDING MANHOLES, STORM DRAIN CATCH BASINS, VALVES, BOXES, ETC., SHALL BE PROTECTED IN PLACE AND REMAIN OPERATIONAL AT ALL TIMES UNLESS NOTED OTHERWISE.
10. THE LOCATIONS OF ALL UNDERGROUND FACILITIES SHOWN ON THIS PLAN ARE APPROXIMATE. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL UNDERGROUND FACILITIES; HOWEVER, THE CONSULTANT ENGINEER ASSUMES NO LIABILITY FOR THE ACCURACY OR COMPLETENESS OF THE EXISTING FACILITIES SHOWN HEREON OR FOR THE EXISTENCE OF OTHER UNDERGROUND UTILITIES OR OBJECTS WHICH MAY BE DISCOVERED BUT ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING FACILITIES AND IMMEDIATELY NOTIFY THE ENGINEER IF ANY SUCH FACILITIES INTERFERE WITH THE CONSTRUCTION OF IMPROVEMENTS. CALL U.S.A. AT 811. THE CONTRACTOR SHALL STOP WORK AROUND THE AREA OF CONFLICT UNTIL HE IS DIRECTED BY THE ENGINEER TO CONTINUE.
11. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE WATER RESOURCES CONTROL BOARD (SWRCB) ORDER NO. 2009-0009-DWQ. THE CONTRACTOR SHALL IMPLEMENT AND MONITOR A STORM WATER POLLUTION PREVENTION PLAN IN ACCORDANCE WITH THE SWRCB REGULATIONS. THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS IN THE STORMWATER BEST MANAGEMENT PRACTICE CONSTRUCTION HANDBOOK WHICH IS PREPARED BY CASQA AND ADOPTED BY THE STATE AND THE CITY. IT IS PROHIBITED TO DISCHARGE ANYTHING EXCEPT CLEAN WATER INTO THE STORM DRAIN SYSTEM.
12. ATTENTION IS CALLED TO: SECTION 1540(A) (1) OF THE CONSTRUCTION SAFETY ORDERS (TITLE 25. 8 CALIFORNIA ADMINISTRATION CODE SECTION 1540), ISSUED BY THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD PURSUANT TO THE CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT OF 1973, AS AMENDED, WHICH STATES:

"PRIOR TO OPENING AN EXCAVATION, EFFORT SHALL BE MADE TO DETERMINE WHETHER UNDERGROUND INSTALLATION I.E., SEWER, WATER, FUEL, ELECTRIC LINES, ETC., WILL BE ENCOUNTERED AND, IF SO, WHERE SUCH UNDERGROUND INSTALLATIONS ARE LOCATED. WHEN THE EXCAVATION APPROACHES THE APPROXIMATE LOCATION OF SUCH AN INSTALLATION, THE EXACT LOCATION SHALL BE DETERMINED BY CAREFUL PROBING OR HAND DIGGING AND WHEN IT IS UNCOVERED, ADEQUATE PROTECTION SHALL BE PROVIDED FOR THE EXISTING INSTALLATION. ALL KNOWN OWNERS OF UNDERGROUND FACILITIES IN THE AREA CONCERNED SHALL BE ADVISED OF PROPOSED WORK AT LEAST 48 HOURS PRIOR TO THE START OF ACTUAL EXCAVATION."
13. THE CONTRACTOR SHALL PROVIDE SHORING, BRACING, SLOPING OR PROVISIONS TO PROTECT WORKERS FOR ALL AREAS TO BE EXCAVATED TO A DEPTH OF FIVE FEET OR MORE. SAID PROTECTION TO BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF LOCAL, STATE, AND FEDERAL REGULATIONS (CAL-OSHA, OSHA).
14. THE CONTRACTOR SHALL PROVIDE ADEQUATE TRAFFIC CONTROLS AND SHALL SUBMIT TO THE CITY TRAFFIC ENGINEERING DIVISION A TRAFFIC CONTROL PLAN FOR EACH PHASE OF WORK PRIOR TO THE START OF CONSTRUCTION.
15. PRIOR TO BEGINNING ANY WORK ON EXISTING STREETS, ADVANCE WARNING SIGNS SHALL BE INSTALLED. TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH CALTRANS' 2014 CALIFORNIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD), AND ANY ADDITIONAL CITY REQUIREMENTS. FAILURE TO COMPLY MAY RESULT IN IMMEDIATE STOPPAGE OF WORK UNTIL THE PROPER TRAFFIC CONTROL IS IN ORDER.
16. TRAFFIC CONTROL MAINTENANCE AND OPERATION SHALL COMPLY WITH THE FOLLOWING STATE STANDARD SPECIFICATION SECTIONS:

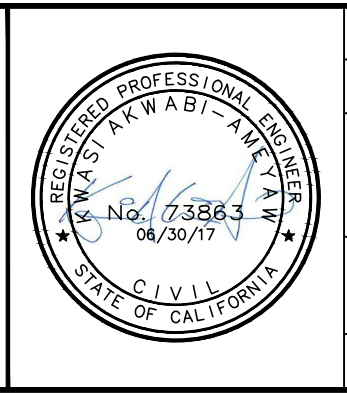
SECTION 7-1.04 "PUBLIC SAFETY"
SECTION 7-1.03 "PUBLIC CONVENIENCE"
SECTION 12 "TEMPORARY TRAFFIC CONTROL"
17. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY.
18. ALL EXISTING SIGNS AND POSTS SHALL REMAIN UNLESS OTHERWISE NOTED.
19. THE CONTRACTOR SHALL BACKFILL WITH CUTBACK EACH NIGHT ANY AREAS NOT COMPLETED TO ITS FINISHED STATE. ALL EXCAVATED AREAS SHALL BE PROTECTED FROM PEDESTRIAN AND VEHICULAR TRAFFIC AT ALL TIMES.
20. ALL NEW FLATWORK SHALL BE DRILLED AND DOWELED AND/OR KEYED INTO EXISTING FLATWORK IN ACCORDANCE WITH CITY OF CAPITOLA STANDARD PLANS AND SPECIFICATIONS.
21. ALL EXISTING PUBLIC AND PRIVATE IMPROVEMENTS, INCLUDING ALL CURBS, GUTTERS, SIDEWALKS, IRRIGATION, LANDSCAPING, AND FENCES, THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED TO THE SATISFACTION OF THE ENGINEER, AT CONTRACTOR'S SOLE EXPENSE.
22. THE CONTRACTOR SHALL REPLACE ANY PAVEMENT DELINEATION OR TRAFFIC MARKINGS REMOVED OR DAMAGED IN THE COURSE OF THIS WORK. PRIOR TO ANY REMOVAL, THE CONTRACTOR SHALL DOCUMENT THE TYPE AND LOCATION OF THE PAVEMENT DELINEATION/ MARKINGS.
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPACTION TESTING AND SHALL PROVIDE TO THE CITY ALL COMPACTION TEST RESULTS SHOWING THAT THE CITY'S MINIMUM COMPACTION STANDARDS HAVE BEEN ACHIEVED.
24. THE CONTRACTOR SHALL ADHERE TO CALTRANS STANDARD PLANS AND SPECIFICATIONS FOR ALL WORK TAKING PLACE WITHIN CALTRANS RIGHT-OF-WAY.

Plotted By: Pitman, Brendan Sheet Set: Kha Layout: 2 GN01 January 11, 2017 06:25:03pm K:\OAK\JTS\097763118 - Capitola 41st Avenue Adaptive System - KGA\CADD\Plan Sheets\2 GN01.dwg
 This document, together with the concepts and designs presented herein, is an instrument of service, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



No.	REVISIONS	DATE	BY


 © 2016 KIMLEY-HORN AND ASSOCIATES, INC.
 1300 CLAY STREET, SUITE 325, OAKLAND, CA 94612
 PHONE: 510-350-0217
 WWW.KIMLEY-HORN.COM



DESIGNED BY	DRAWN BY	CHECKED BY
JCS	SAR	KA
PLANS PREPARED UNDER SUPERVISION OF:		
KWASI AKWABI-AMEYAW REGISTERED CIVIL ENGINEER		
06/30/2017 DATE		73863 RCE NO.

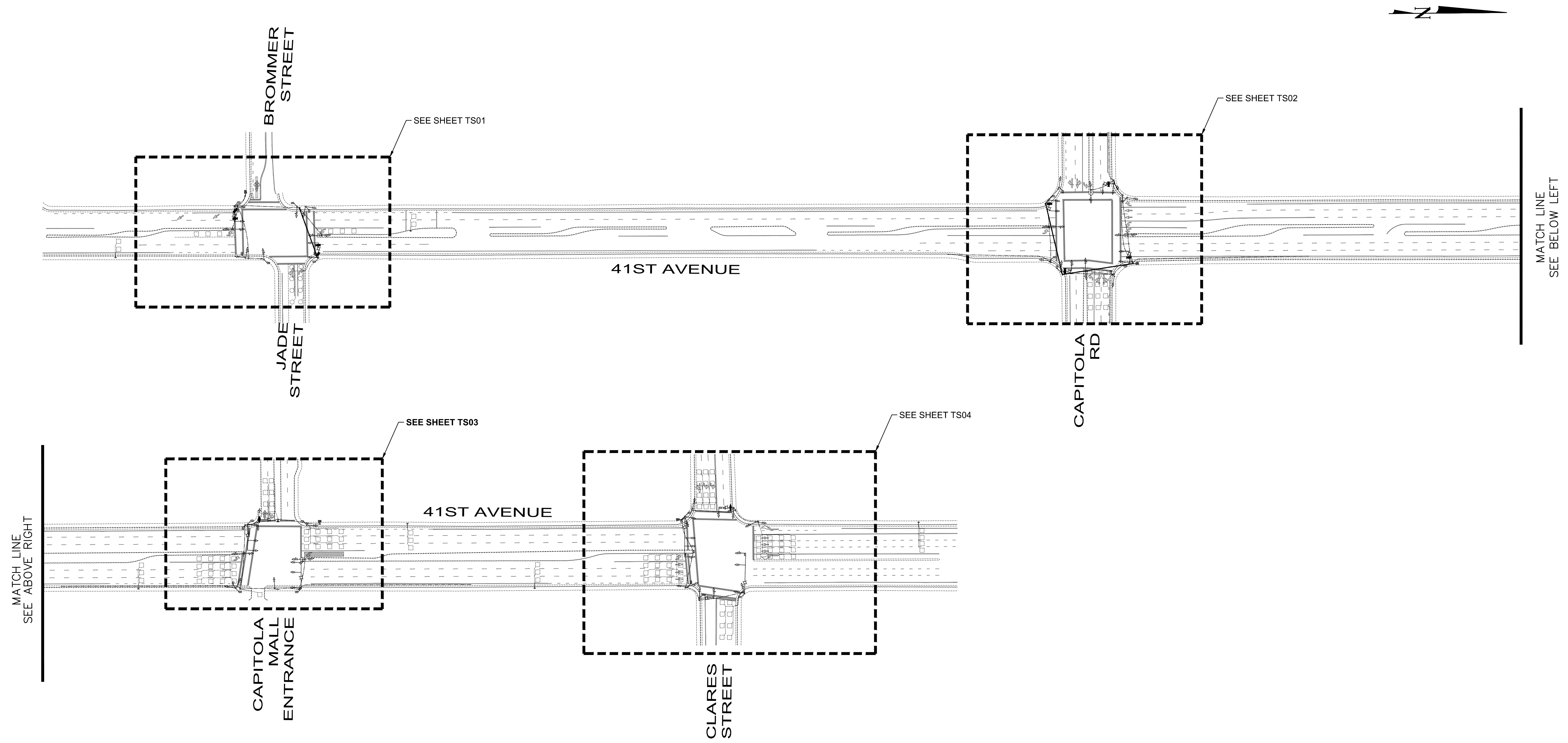
**41ST AVENUE
ADAPTIVE SYSTEM**

 PREPARED FOR
CITY OF CAPITOLA

GENERAL NOTES

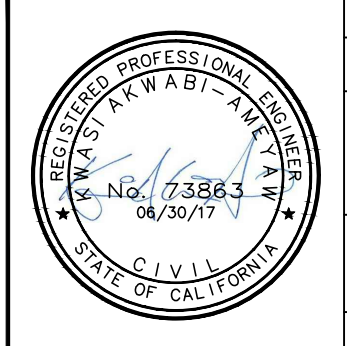
DRAWING NO GN01
SHEET 2 of 11
JOB No. 097763118

Plotted By: Pittman, Brendan Sheet Set: Kha Layout: 3 KM01 January 11, 2017 06:25:22pm K:\OAK\JTS\097763118 - Capitola 41st Avenue Adaptive System - KGA\CADD\Plan Sheets\3 KM01.dwg
 This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and merger reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



No.	REVISIONS	DATE	BY

Kimley»Horn
 © 2016 KIMLEY-HORN AND ASSOCIATES, INC.
 1300 CLAY STREET, SUITE 325, OAKLAND, CA 94612
 PHONE: 510-350-0217
 WWW.KIMLEY-HORN.COM



DESIGNED BY	DRAWN BY	CHECKED BY
JCS	SAR	KA
PLANS PREPARED UNDER SUPERVISION OF:		
KWASI AKWABI-AMEYAW REGISTERED CIVIL ENGINEER		
06/30/2017	73863	
DATE	RCE NO.	

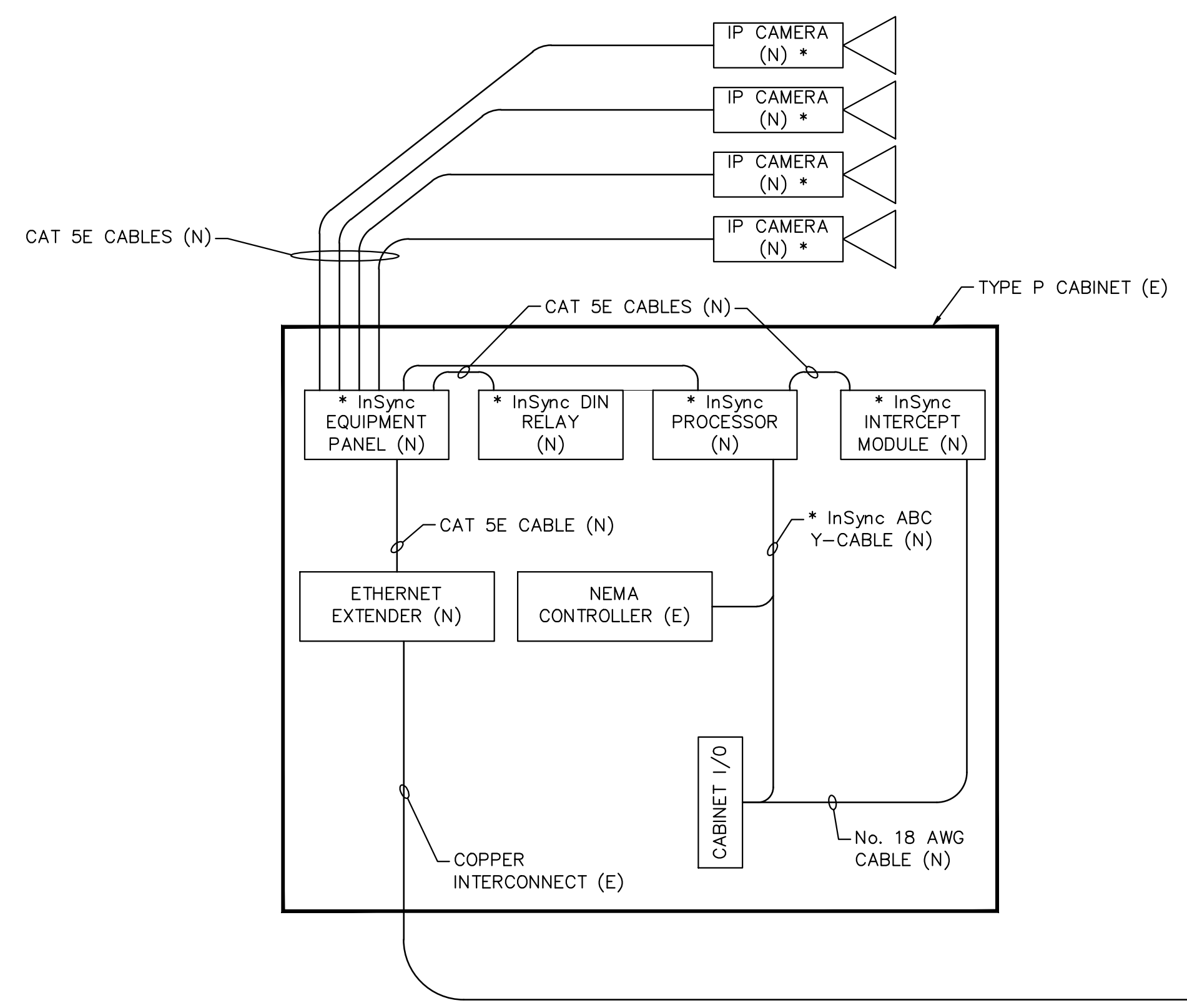
**41ST AVENUE
 ADAPTIVE SYSTEM**
 PREPARED FOR
 CITY OF CAPITOLA

KEY MAP

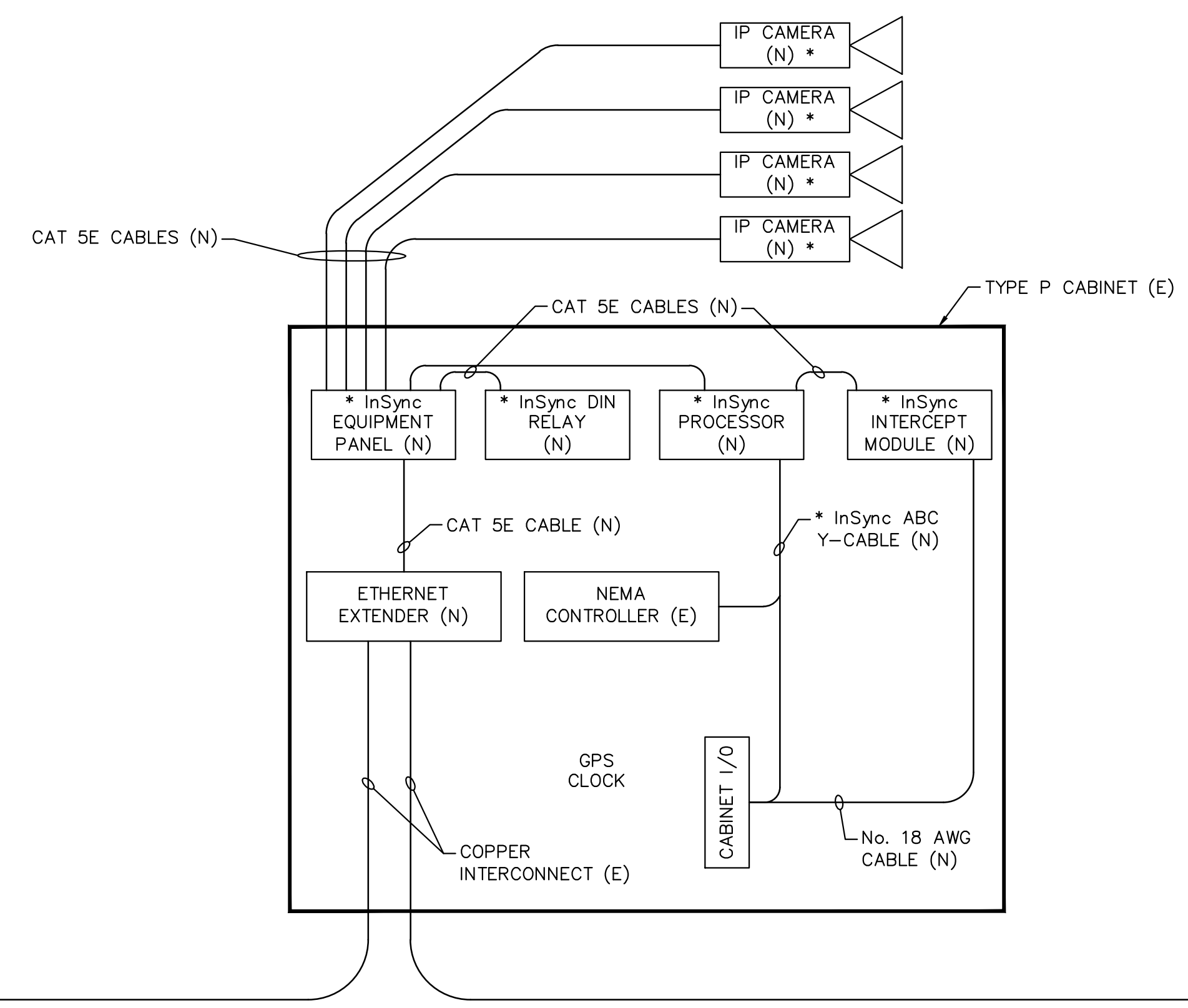
DRAWING NO	KM01
SHEET	3 of 11
JOB No.	097763118



Plotted By: Pittman, Brendan Sheet Set: KHA Layout: 4 SY01 January 11, 2017 06:25:33pm K:\OAK\JTS\097763118 - Capitolia 41st Avenue Adaptive System - KGA\CADD\Plan Sheets\4 SY01.dwg
 This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and merger reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

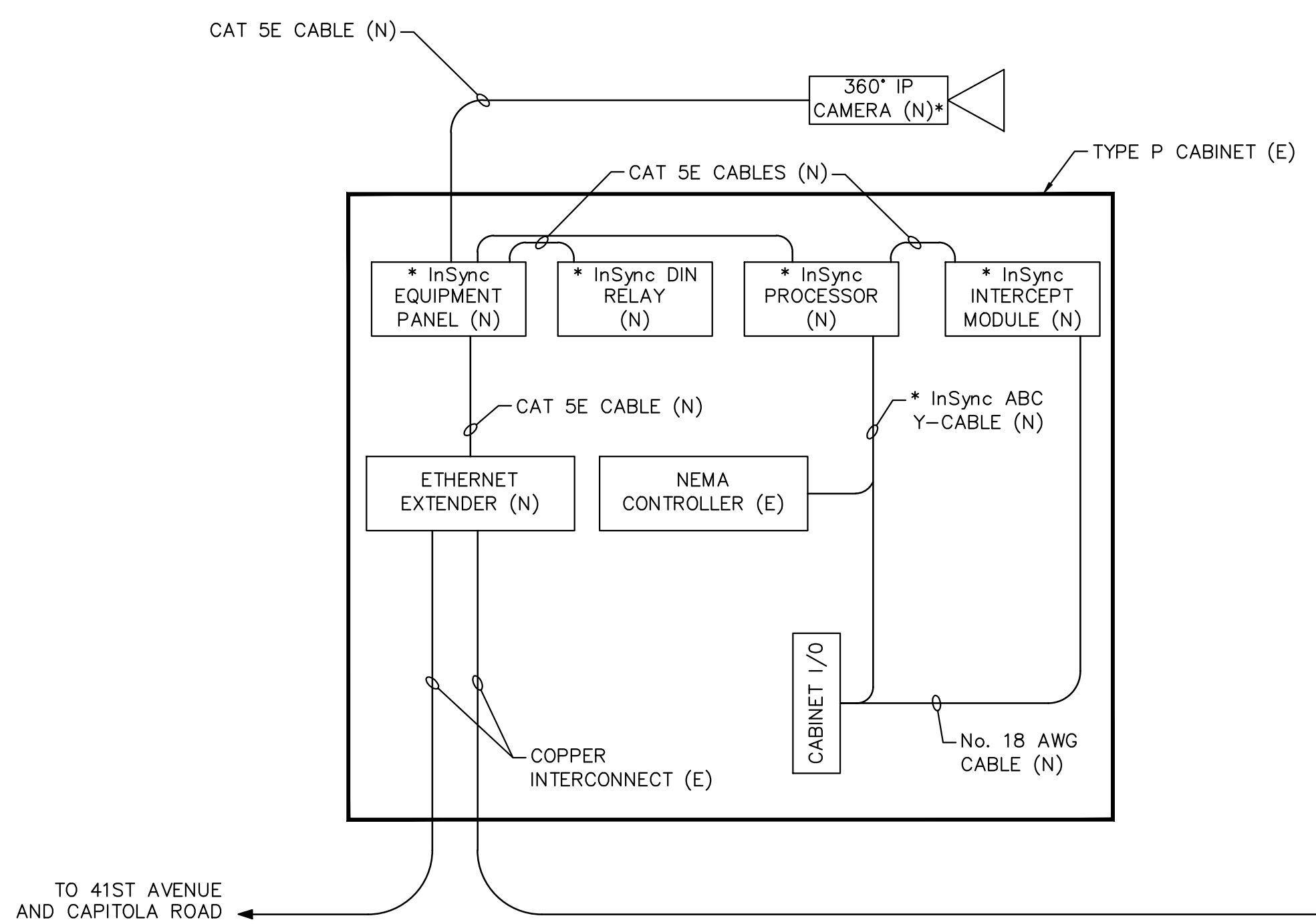


41ST AVENUE AND JADE STREET



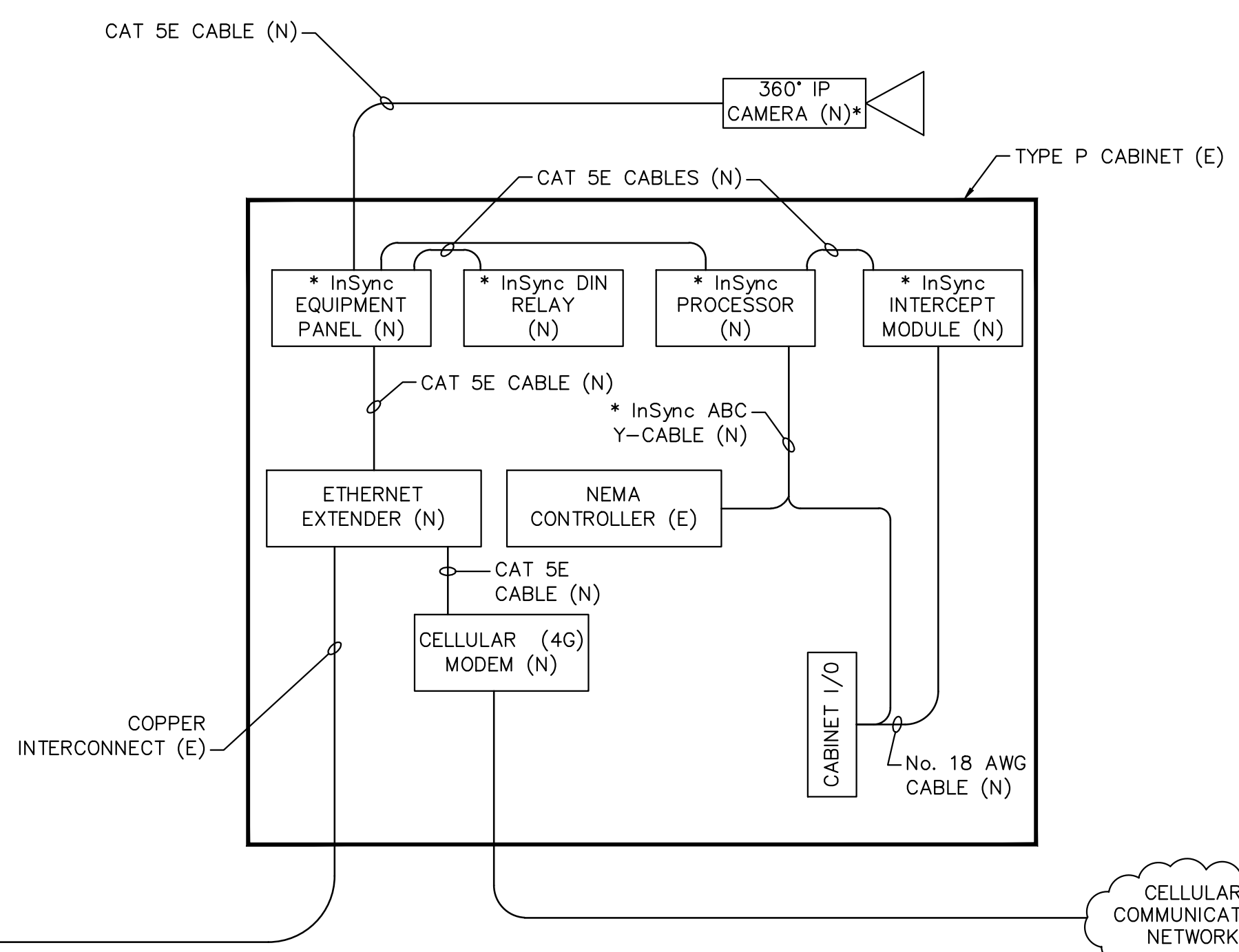
41ST AVENUE AND CAPITOLA ROAD

TO 41ST AVENUE AND CAPITOLA MALL ENTRANCE SIGNAL CABINET



41ST AVENUE AND CAPITOLA MALL ENTRANCE

TO 41ST AVENUE AND CAPITOLA ROAD SIGNAL CABINET



41ST AVENUE AND CLARES STREET

CELLULAR COMMUNICATION NETWORK
 RHYTHM ENGINEERING
 CITY HALL

NOTES:

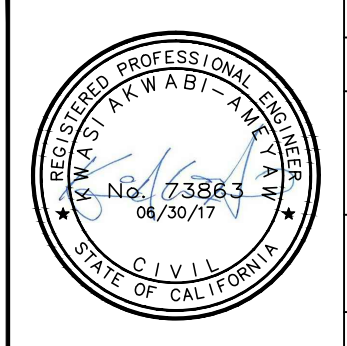
- CONTRACTOR SHALL PURCHASE THE FOLLOWING EQUIPMENT FROM CITY OF CAPITOLA PRE-APPROVED ADAPTIVE SIGNAL SYSTEM VENDOR (RHYTHM ENGINEERING):
 - IP CAMERA
 - InSync EQUIPMENT PANEL
 - InSync DIN RELAY
 - InSync PROCESSOR
 - InSync INTERCEPT MODULE
 - InSync ABC Y-CABLE
- CONTRACTOR AND ADAPTIVE SYSTEM VENDOR TO WORK WITH CITY STAFF TO ESTABLISH VPN CONNECTION FOR REMOTE ACCESS TO ADAPTIVE CORRIDOR.
- CONTRACTOR SHALL WORK WITH CITY TO SETUP A 4G CELLULAR COMMUNICATIONS LINK TO THE CONTROLLER CABINET AT 41ST AVE./CLARES ST.

(N) – PROPOSED EQUIPMENT
 (E) – EXISTING EQUIPMENT



No.	REVISIONS	DATE	BY

Kimley»Horn
 © 2016 KIMLEY-HORN AND ASSOCIATES, INC.
 1300 CLAY STREET, SUITE 325, OAKLAND, CA 94612
 PHONE: 510-350-0217
 WWW.KIMLEY-HORN.COM



DESIGNED BY	DRAWN BY	CHECKED BY
JCS	SAR	KA
PLANS PREPARED UNDER SUPERVISION OF:		
KWASI AKWABI-AMEYAW REGISTERED CIVIL ENGINEER		
06/30/2017	73863	RCE NO.
DATE		

**41ST AVENUE
 ADAPTIVE SYSTEM**
 PREPARED FOR
 CITY OF CAPITOLA

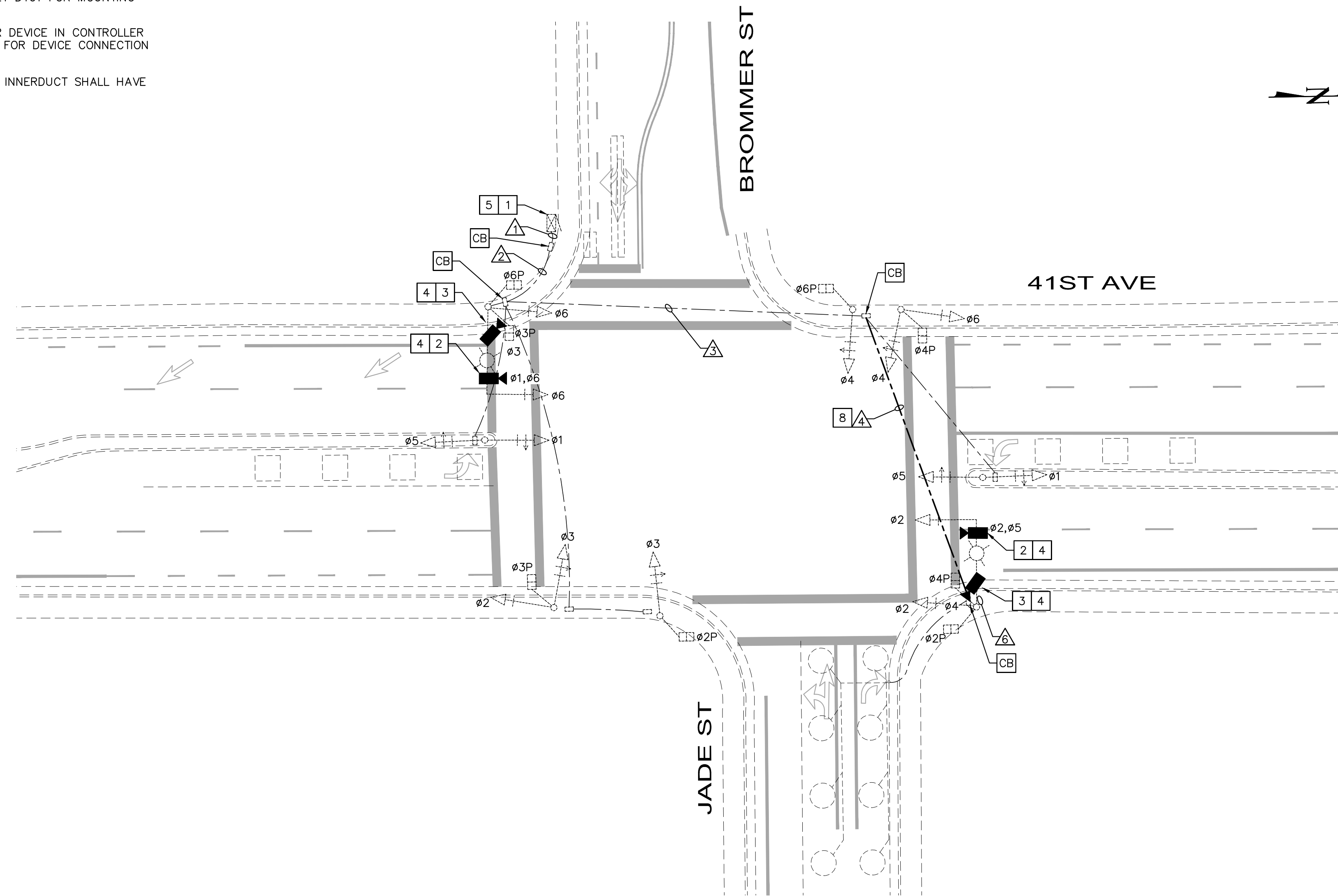
**CONTROLLER CABINET
 SYSTEM DIAGRAM**

DRAWING NO	SY01
SHEET	4 of 11
JOB No.	097763118

Plotted By: Pitman, Brendan
 Sheet Set: KHA Layout: 5 TS01 January 11, 2017 06:25:50pm
 K:\OAK\JTS\097763118 - Capitolia 41st Avenue Adaptive System - KGA\CADD\Plan Sheets\5 TS01.dwg
 This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and merger reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

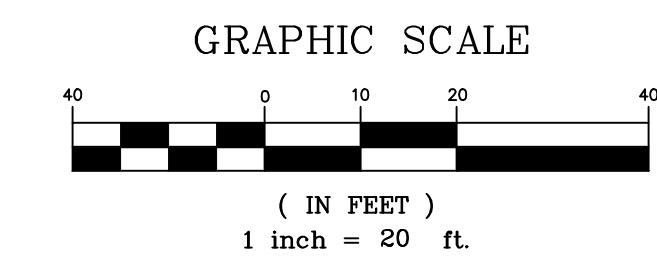
CONSTRUCTION NOTES:

- 1 FURNISH AND INSTALL THE FOLLOWING ADAPTIVE SIGNAL SYSTEM ITEMS PURCHASED FROM THE CITY OF CAPITOLA'S PRE-APPROVED ADAPTIVE SYSTEM VENDOR (RHYTHM ENGINEERING), IN EXISTING TRAFFIC SIGNAL CABINET: ADAPTIVE SYSTEM PROCESSOR, INTERCEPT MODULE, EQUIPMENT PANEL, AND Y CABLE. MAKE ALL CONNECTIONS NECESSARY PER ADAPTIVE SYSTEM VENDOR SPECIFICATIONS, TECHNICAL SPECIFICATIONS, AND SYSTEM DIAGRAM ON SHEET SY01 OF THESE PLANS.
- 2 FURNISH AND INSTALL CITY OF CAPITOLA'S PRE-APPROVED ADAPTIVE SYSTEM VENDOR'S (RHYTHM ENGINEERING) IP CAMERA AND CAMERA ENCLOSURE ON TRAFFIC SIGNAL MAST ARM.
- 3 FURNISH AND INSTALL CITY OF CAPITOLA'S PRE-APPROVED ADAPTIVE SYSTEM VENDOR'S (RHYTHM ENGINEERING) IP CAMERA AND CAMERA ENCLOSURE ON LUMINAIRE ARM.
- 4 FURNISH AND INSTALL IP CAMERA MOUNTING HARDWARE. SEE SHEET DT01 FOR MOUNTING DETAIL.
- 5 FURNISH AND INSTALL NEW LONG-RANGE ETHERNET-OVER-COPPER DEVICE IN CONTROLLER CABINET. SEE SYSTEM DIAGRAM ON SHEET SY01 OF THESE PLANS, FOR DEVICE CONNECTION DIAGRAM.
- 8 FURNISH AND INSTALL 3" C WITH 3-CELL FABRIC INNERDUCT. EACH INNERDUCT SHALL HAVE MULE TAPE.



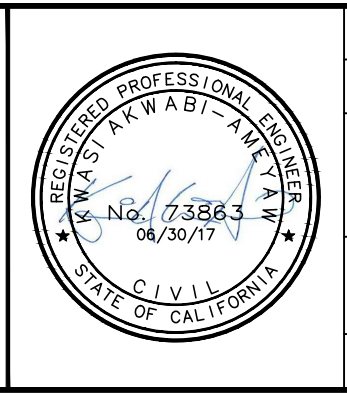
CONDUCTOR DESIGNATION	NUMBER OF CONDUCTORS			
	1	2	3	4
INSYNC CAMERA CABLES***				
INSYNC Ø2,Ø5	1N	1N	1N	1N
INSYNC Ø3	1N	1N		
INSYNC Ø4	1N	1N	1N	1N
INSYNC Ø6,Ø1	1N	1N		
CONDUIT SIZE (INCHES)	2-3	3	3	3N

EXISTING CONDUCTORS NOT SHOWN
 N - DENOTES NEW CONDUIT OR CONDUCTOR
 *** 3#14 (IP CAMERA POWER), 1-CAT5E (IP CAMERA COMM)



No.	REVISIONS	DATE	BY

Kimley»Horn
 © 2016 KIMLEY-HORN AND ASSOCIATES, INC.
 1300 CLAY STREET, SUITE 325, OAKLAND, CA 94612
 PHONE: 510-350-0217
 WWW.KIMLEY-HORN.COM



DESIGNED BY	DRAWN BY	CHECKED BY
JCS	SAR	KA
PLANS PREPARED UNDER SUPERVISION OF:		
KWASI AKWABI-AMEYAW REGISTERED CIVIL ENGINEER		
06/30/2017 DATE	73863 RCE NO.	

**41ST AVENUE
 ADAPTIVE SYSTEM**
 PREPARED FOR
 CITY OF CAPITOLA

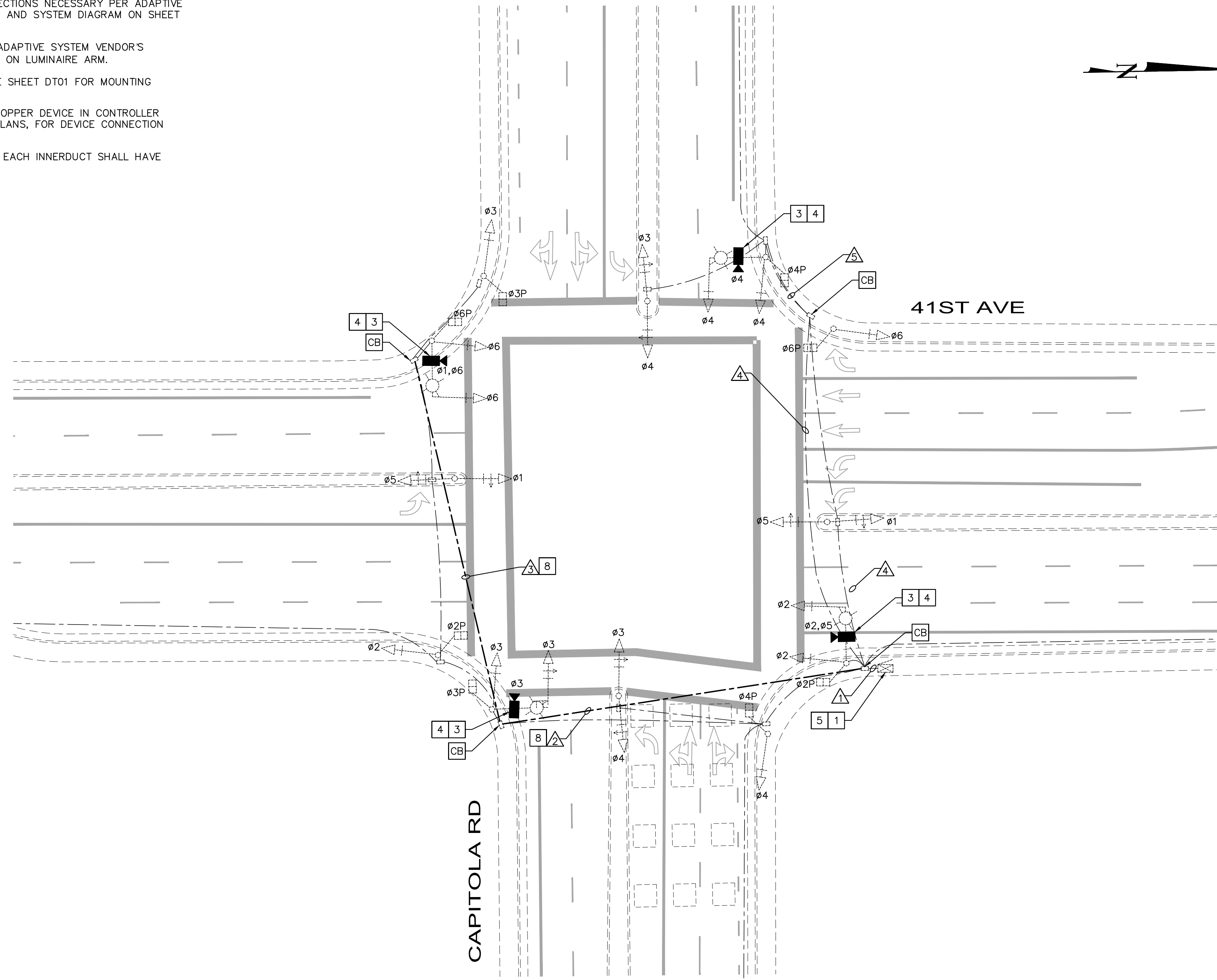
41ST AVE AND JADE ST

DRAWING NO TS01
SHEET 5 of 11
JOB No. 097763118

Plotted By: Pitman, Brendan Sheet Set: KHA Layout: 6 TS02 January 11, 2017 06:26:05pm K:\OAK\JTS\097763118 - Capitolola 41st Avenue Adaptive System - KGA\CAAD\Plan Sheets\6 TS02.dwg
 This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and merger reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

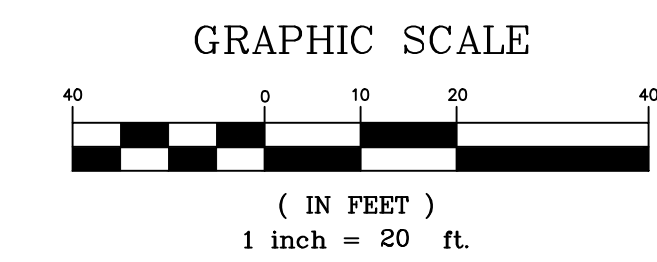
CONSTRUCTION NOTES:

- 1 FURNISH AND INSTALL THE FOLLOWING ADAPTIVE SIGNAL SYSTEM ITEMS PURCHASED FROM THE CITY OF CAPITOLA'S PRE-APPROVED ADAPTIVE SYSTEM VENDOR (RHYTHM ENGINEERING), IN EXISTING TRAFFIC SIGNAL CONTROLLER CABINET: ADAPTIVE SYSTEM PROCESSOR, INTERCEPT MODULE, EQUIPMENT PANEL, AND Y CABLE. MAKE ALL CONNECTIONS NECESSARY PER ADAPTIVE SYSTEM VENDOR SPECIFICATIONS, TECHNICAL SPECIFICATIONS, AND SYSTEM DIAGRAM ON SHEET SY01 OF THESE PLANS.
- 3 FURNISH AND INSTALL CITY OF CAPITOLA'S PRE-APPROVED ADAPTIVE SYSTEM VENDORS (RHYTHM ENGINEERING) IP CAMERA AND CAMERA ENCLOSURE ON LUMINAIRE ARM.
- 4 FURNISH AND INSTALL IP CAMERA MOUNTING HARDWARE. SEE SHEET DT01 FOR MOUNTING DETAIL.
- 5 FURNISH AND INSTALL NEW LONG-RANGE ETHERNET-OVER-COPPER DEVICE IN CONTROLLER CABINET. SEE SYSTEM DIAGRAM ON SHEET SY01 OF THESE PLANS, FOR DEVICE CONNECTION DIAGRAM.
- 8 FURNISH AND INSTALL 3" C WITH 3-CELL FABRIC INNERDUCT. EACH INNERDUCT SHALL HAVE MULE TAPE.



CONDUCTOR DESIGNATION	NUMBER OF CONDUCTORS RUN NUMBER				
	1	2	3	4	5
INSYNC CAMERA CABLES***					
INSYNC ø2,ø5	1N				
INSYNC ø3	1N	1N			
INSYNC ø4	1N			1N	1N
INSYNC ø6,ø1	1N	1N	1N		
CONDUIT SIZE (INCHES)	3-2	3N	3N	3	2,3

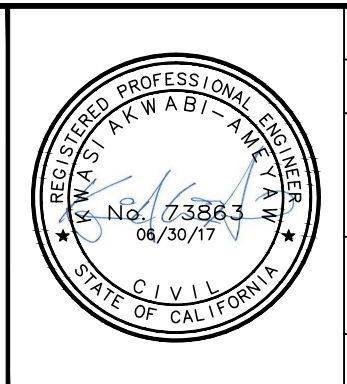
EXISTING CONDUCTORS NOT SHOWN
 N - DENOTES NEW CONDUIT OR CONDUCTOR
 *** 3#14 (IP CAMERA POWER), 1-CAT5E (IP CAMERA COMM)



No.	REVISIONS	DATE	BY

Kimley»Horn

© 2016 KIMLEY-HORN AND ASSOCIATES, INC.
 1300 CLAY STREET, SUITE 325, OAKLAND, CA 94612
 PHONE: 510-350-0217
 WWW.KIMLEY-HORN.COM



DESIGNED BY	DRAWN BY	CHECKED BY
JCS	SAR	KA
PLANS PREPARED UNDER SUPERVISION OF:		
KWASI AKWABI-AMEYAW REGISTERED CIVIL ENGINEER		
06/30/2017		73863
DATE		RCE NO.

41ST AVENUE
 ADAPTIVE SYSTEM
 PREPARED FOR
 CITY OF CAPITOLA

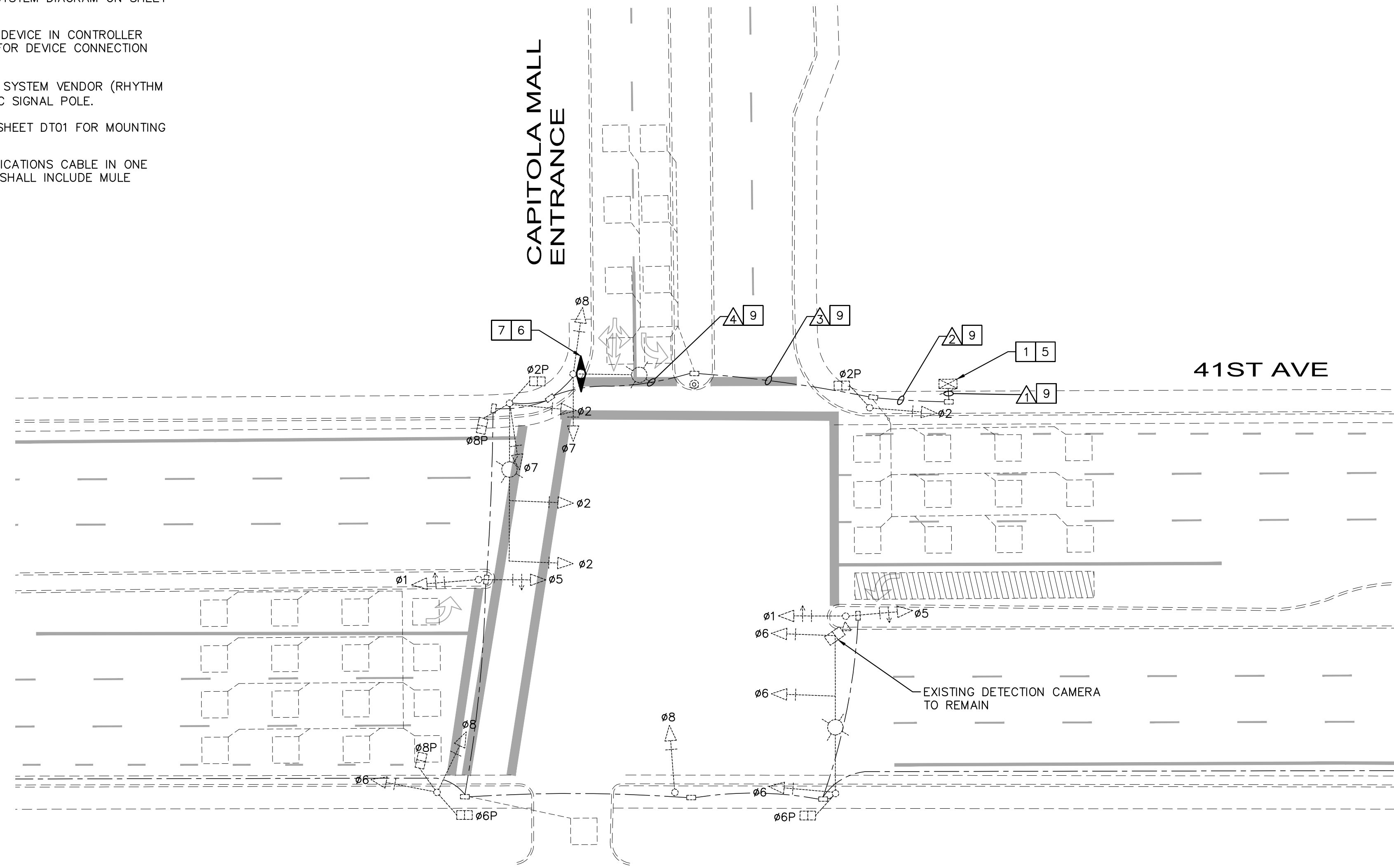
41ST AVE AT CAPITOLA RD

DRAWING NO	TS02
SHEET	6 of 11
JOB No.	097763118

Plotted By: Pitman, Brendan
 Sheet Set: KHA Layout: 7 TS03 January 11, 2017 06:26:20pm K:\OAK\JTS\097763118 - Capitolola 41st Avenue Adaptive System - KGA\CAAD\Plan Sheets\7 TS03.dwg
 This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and merger reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

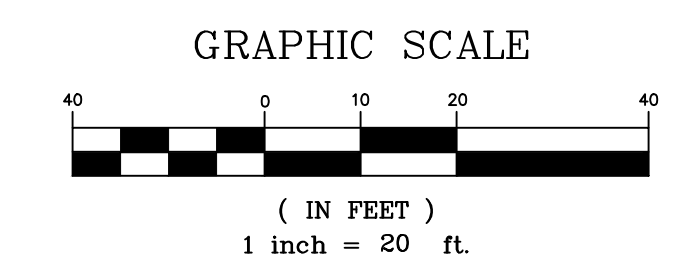
CONSTRUCTION NOTES:

- 1 FURNISH AND INSTALL THE FOLLOWING ADAPTIVE SIGNAL SYSTEM ITEMS PURCHASED FROM THE CITY OF CAPITOLA'S PRE-APPROVED ADAPTIVE SYSTEM VENDOR (RHYTHM ENGINEERING), IN EXISTING TRAFFIC SIGNAL CABINET: ADAPTIVE SYSTEM PROCESSOR, INTERCEPT MODULE, EQUIPMENT PANEL, AND Y CABLE. MAKE ALL CONNECTIONS NECESSARY PER ADAPTIVE SYSTEM VENDOR SPECIFICATIONS, TECHNICAL SPECIFICATIONS, AND SYSTEM DIAGRAM ON SHEET SY01 OF THESE PLANS.
- 5 FURNISH AND INSTALL NEW LONG-RANGE ETHERNET-OVER-COPPER DEVICE IN CONTROLLER CABINET. SEE SYSTEM DIAGRAM ON SHEET SY01 OF THESE PLANS, FOR DEVICE CONNECTION DIAGRAM.
- 6 FURNISH AND INSTALL CITY OF CAPITOLA PRE-APPROVED ADAPTIVE SYSTEM VENDOR (RHYTHM ENGINEERING) 360° IP CAMERA AND CAMERA ENCLOSURE ON TRAFFIC SIGNAL POLE.
- 7 FURNISH AND INSTALL 360° IP CAMERA MOUNTING HARDWARE. SEE SHEET DT01 FOR MOUNTING DETAIL.
- 9 FURNISH AND INSTALL 3-CELL FABRIC INNERDUCT. INSTALL COMMUNICATIONS CABLE IN ONE CELL AND POWER CABLES IN A DIFFERENT CELL. ALL EMPTY CELLS SHALL INCLUDE MULE TAPE.



CONDUCTOR DESIGNATION	NUMBER OF CONDUCTORS RUN NUMBER			
	1	2	3	4
INSYNC CAMERA CABLES***				
INSYNC 360° IP	1N	1N	1N	1N
CONDUIT SIZE (INCHES)	3	3	3	3

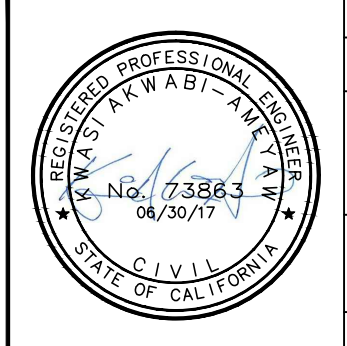
EXISTING CONDUCTORS NOT SHOWN
 N - DENOTES NEW CONDUIT OR CONDUCTOR
 *** 3#14 (IP CAMERA POWER), 1-CAT5E (IP CAMERA COMM)



No.	REVISIONS	DATE	BY

Kimley»Horn

© 2016 KIMLEY-HORN AND ASSOCIATES, INC.
 1300 CLAY STREET, SUITE 325, OAKLAND, CA 94612
 PHONE: 510-350-0217
 WWW.KIMLEY-HORN.COM



DESIGNED BY	DRAWN BY	CHECKED BY
JCS	SAR	KA
PLANS PREPARED UNDER SUPERVISION OF:		
KWASI AKWABI-AMEYAW REGISTERED CIVIL ENGINEER		
06/30/2017 DATE		73863 RCE NO.

**41ST AVENUE
ADAPTIVE SYSTEM**
 PREPARED FOR
CITY OF CAPITOLA

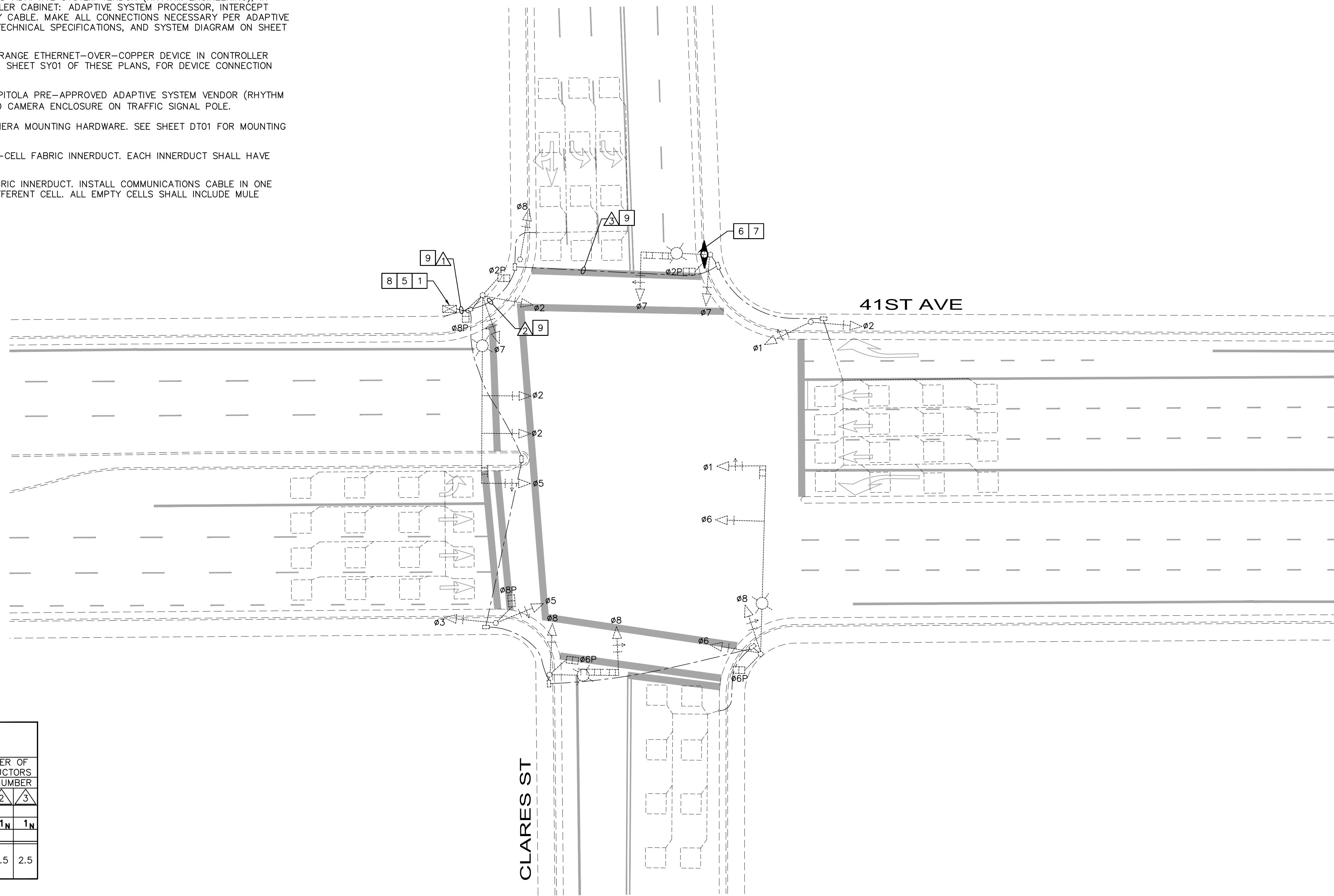
**41ST AVE AND CAPITOLA
MALL ENTRANCE**

DRAWING NO TS03
SHEET 7 of 11
JOB No. 097763118

Plotted By: Pitman, Brendan
 Sheet Set: KHA Layout: 8 TS04 January 11, 2017 06:26:35pm K:\OAK\JTS\097763118 - Capitola 41st Avenue Adaptive System - KGA\CAAD\Plan Sheets\8 TS04.dwg
 This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and merger reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

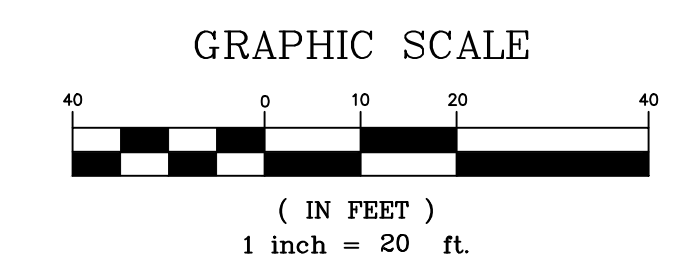
CONSTRUCTION NOTES:

- 1 FURNISH AND INSTALL THE FOLLOWING ADAPTIVE SIGNAL SYSTEM ITEMS PURCHASED FROM THE CITY OF CAPITOLA'S PRE-APPROVED ADAPTIVE SYSTEM VENDOR (RHYTHM ENGINEERING), IN EXISTING TRAFFIC SIGNAL CONTROLLER CABINET: ADAPTIVE SYSTEM PROCESSOR, INTERCEPT MODULE, EQUIPMENT PANEL, AND Y CABLE. MAKE ALL CONNECTIONS NECESSARY PER ADAPTIVE SYSTEM VENDOR SPECIFICATIONS, TECHNICAL SPECIFICATIONS, AND SYSTEM DIAGRAM ON SHEET SY01 OF THESE PLANS.
- 5 FURNISH AND INSTALL NEW LONG-RANGE ETHERNET-OVER-COPPER DEVICE IN CONTROLLER CABINET. SEE SYSTEM DIAGRAM ON SHEET SY01 OF THESE PLANS, FOR DEVICE CONNECTION DIAGRAM.
- 6 FURNISH AND INSTALL CITY OF CAPITOLA PRE-APPROVED ADAPTIVE SYSTEM VENDOR (RHYTHM ENGINEERING) 360° IP CAMERA AND CAMERA ENCLOSURE ON TRAFFIC SIGNAL POLE.
- 7 FURNISH AND INSTALL 360° IP CAMERA MOUNTING HARDWARE. SEE SHEET DT01 FOR MOUNTING DETAIL.
- 8 FURNISH AND INSTALL 3" C WITH 3-CELL FABRIC INNERDUCT. EACH INNERDUCT SHALL HAVE MULE TAPE.
- 9 FURNISH AND INSTALL 3-CELL FABRIC INNERDUCT. INSTALL COMMUNICATIONS CABLE IN ONE CELL AND POWER CABLES IN A DIFFERENT CELL. ALL EMPTY CELLS SHALL INCLUDE MULE TAPE.



CONDUCTOR SCHEDULE			
CONDUCTOR DESIGNATION	NUMBER OF CONDUCTORS RUN NUMBER		
	1	2	3
INSYNC CAMERA CABLES***			
INSYNC 360° IP	1N	1N	1N
CONDUIT SIZE (INCHES)	3	2.5	2.5

EXISTING CONDUCTORS NOT SHOWN
 N - DENOTES NEW CONDUIT OR CONDUCTOR
 *** 3#14 (IP CAMERA POWER), 1-CAT5E (IP CAMERA COMM)



No.	REVISIONS	DATE	BY

Kimley»Horn
 © 2016 KIMLEY-HORN AND ASSOCIATES, INC.
 1300 CLAY STREET, SUITE 325, OAKLAND, CA 94612
 PHONE: 510-350-0217
 WWW.KIMLEY-HORN.COM



DESIGNED BY	DRAWN BY	CHECKED BY
JCS	SAR	KA
PLANS PREPARED UNDER SUPERVISION OF:		
KWASI AKWABI-AMEYAW REGISTERED CIVIL ENGINEER		
06/30/2017		73863
DATE		RCE NO.

**41ST AVENUE
 ADAPTIVE SYSTEM**
 PREPARED FOR
 CITY OF CAPITOLA

41ST AVE AND CLARES ST

DRAWING NO	TS04
SHEET	8 of 11
JOB No.	097763118

Plotted By: Pittman, Brendan Sheet Set: KHA Layout: 9 EQ01 January 11, 2017 06:26:43pm K:\GAK\JTS\097763118 - Capitola 41st Avenue Adaptive System - KGA\CADD\Plan Sheets\9 EQ01.dwg
 This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and merger reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

LOCATION	PROPOSED EQUIPMENT						
	InSync DETECTION CAMERA	InSync 360° MONITORING CAMERA	WIRELESS MODEM	InSync EQUIPMENT PANEL	InSync SYSTEM PROCESSOR	InSync INTERCEPT MODULE	ETHERNET EXTENDER
41ST AVENUE/JADE STREET	4			1	1	1	1
41ST AVENUE/CAPITOLA ROAD	4			1	1	1	1
41ST AVENUE/CAPITOLA MALL ENTRANCE		1		1	1	1	1
41ST AVENUE/CLARES STREET		1	1	1	1	1	1
TOTAL	8	2	1	4	4	4	4



No.	REVISIONS	DATE	BY

Kimley»Horn
 © 2016 KIMLEY-HORN AND ASSOCIATES, INC.
 1300 CLAY STREET, SUITE 325, OAKLAND, CA 94612
 PHONE: 510-350-0217
 WWW.KIMLEY-HORN.COM



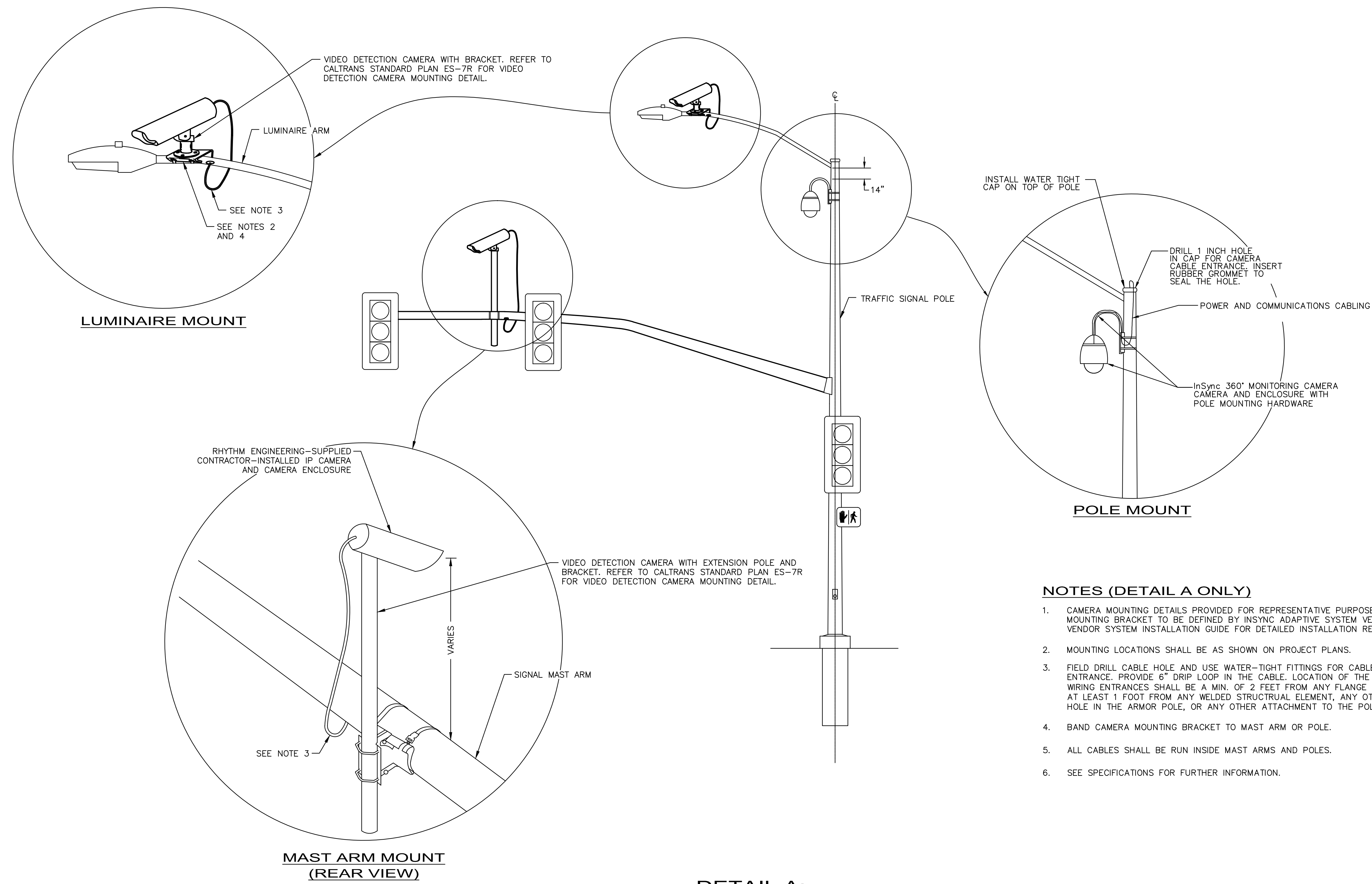
DESIGNED BY	DRAWN BY	CHECKED BY
JCS	SAR	KA
PLANS PREPARED UNDER SUPERVISION OF:		
KWASI AKWABI-AMEYAW REGISTERED CIVIL ENGINEER		
06/30/2017	73863	
DATE	RCE NO.	

**41ST AVENUE
ADAPTIVE SYSTEM**
 PREPARED FOR
CITY OF CAPITOLA

SUMMARY EQUIPMENT LIST

DRAWING NO	EQ01
SHEET	9 of 11
JOB No.	097763118

Plotted By: Pittman, Brendan Sheet Set: KHA Layout: 10 DT01 January 11, 2017 06:26:53pm K:\OAK_JTS\097763118 - Capitola 41st Avenue Adaptive System - KGA\CADD\Plan Sheets\10 DT01.dwg
 This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and merger reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



NOTES (DETAIL A ONLY)

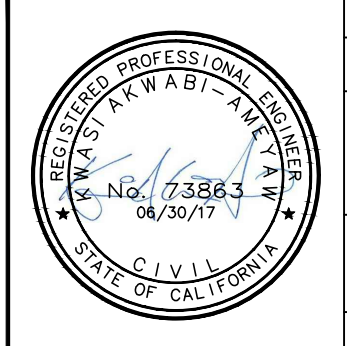
1. CAMERA MOUNTING DETAILS PROVIDED FOR REPRESENTATIVE PURPOSES. ACTUAL MOUNTING BRACKET TO BE DEFINED BY INSYNC ADAPTIVE SYSTEM VENDOR. SEE VENDOR SYSTEM INSTALLATION GUIDE FOR DETAILED INSTALLATION REQUIREMENTS.
2. MOUNTING LOCATIONS SHALL BE AS SHOWN ON PROJECT PLANS.
3. FIELD DRILL CABLE HOLE AND USE WATER-TIGHT FITTINGS FOR CABLE ENTRANCE. PROVIDE 6" DRIP LOOP IN THE CABLE. LOCATION OF THE WIRING ENTRANCES SHALL BE A MIN. OF 2 FEET FROM ANY FLANGE AND AT LEAST 1 FOOT FROM ANY WELDED STRUCTURAL ELEMENT, ANY OTHER HOLE IN THE ARMOR POLE, OR ANY OTHER ATTACHMENT TO THE POLE OR LUMINAIRE ARM.
4. BAND CAMERA MOUNTING BRACKET TO MAST ARM OR POLE.
5. ALL CABLES SHALL BE RUN INSIDE MAST ARMS AND POLES.
6. SEE SPECIFICATIONS FOR FURTHER INFORMATION.

DETAIL A:
SIGNAL POLE CAMERA MOUNTING
 NOT TO SCALE



No.	REVISIONS	DATE	BY

Kimley»Horn
 © 2016 KIMLEY-HORN AND ASSOCIATES, INC.
 1300 CLAY STREET, SUITE 325, OAKLAND, CA 94612
 PHONE: 510-350-0217
 WWW.KIMLEY-HORN.COM



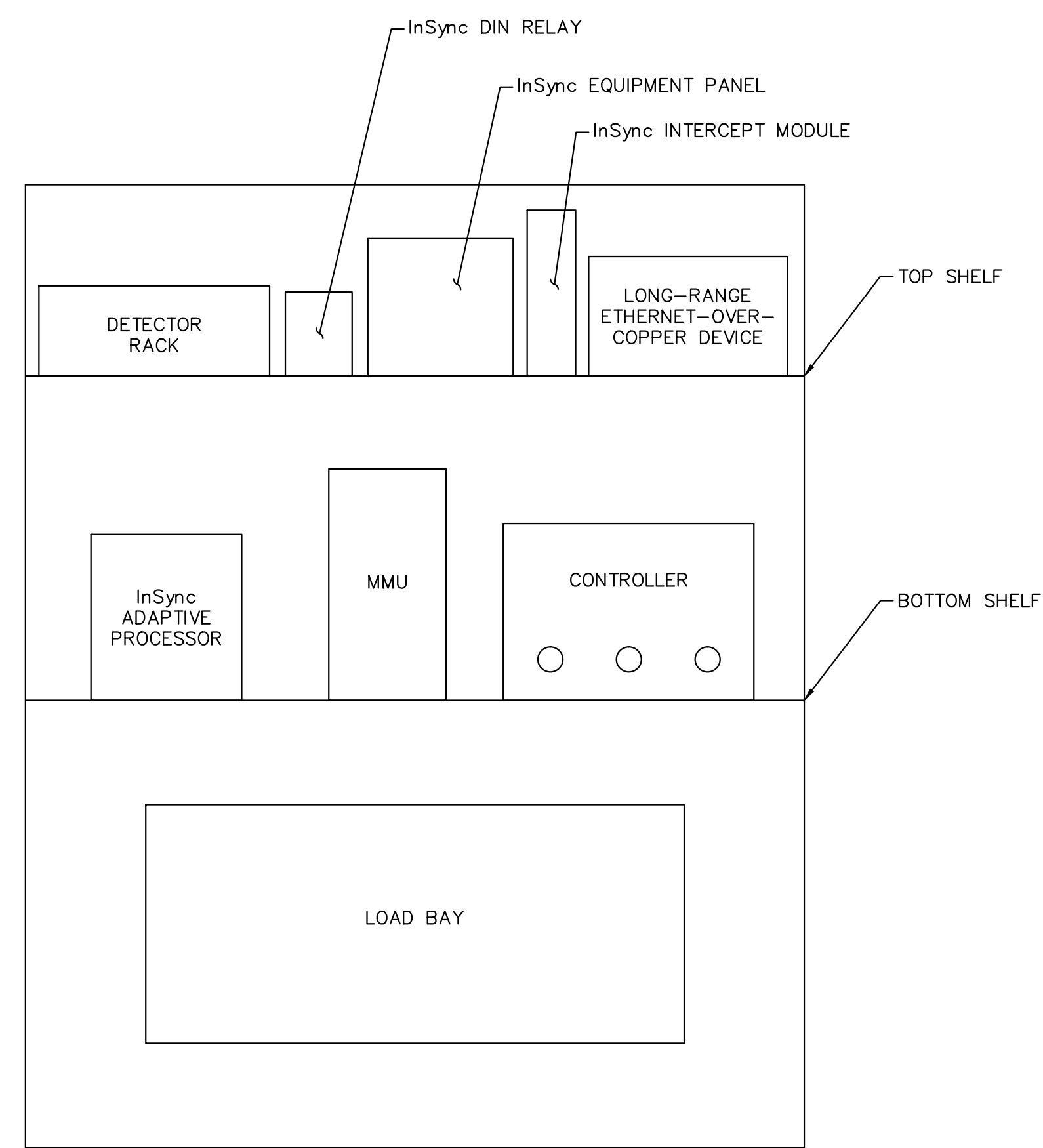
DESIGNED BY	DRAWN BY	CHECKED BY
JCS	SAR	KA
PLANS PREPARED UNDER SUPERVISION OF:		
KWASI AKWABI-AMEYAW REGISTERED CIVIL ENGINEER		
06/30/2017 DATE		73863 RCE NO.

**41ST AVENUE
 ADAPTIVE SYSTEM**
 PREPARED FOR
 CITY OF CAPITOLA

DETAIL SHEET 1

DRAWING NO DT01
SHEET 10 of 11
JOB No. 097763118

Plotted By: Pittman, Brenden Sheet Set: Kha Layout: 11 DT02 January 11, 2017 06:27:03pm K:\OAK_JTS\097763118 - Capitola 41st Avenue Adaptive System - KGA\CADD\Plan Sheets\11 DT02.dwg
 This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and merger reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

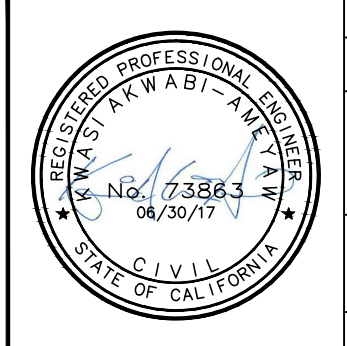


DETAIL B:
TRAFFIC CONTROLLER CABINET CONTENTS ELEVATION
 NOT TO SCALE



No.	REVISIONS	DATE	BY

Kimley»Horn
 © 2016 KIMLEY-HORN AND ASSOCIATES, INC.
 1300 CLAY STREET, SUITE 325, OAKLAND, CA 94612
 PHONE: 510-350-0217
 WWW.KIMLEY-HORN.COM



DESIGNED BY	DRAWN BY	CHECKED BY
JCS	SAR	KAA
PLANS PREPARED UNDER SUPERVISION OF:		
KWASI AKWABI-AMEYAW REGISTERED CIVIL ENGINEER		
06/30/2017 DATE	73863 RCE NO.	

**41ST AVENUE
 ADAPTIVE SYSTEM**
 PREPARED FOR
 CITY OF CAPITOLA

DETAIL SHEET 2

DRAWING NO DT02
SHEET 11 of 11
JOB No. 097763118