Your Life Safety and Security

Solution

Fire • Healthcare • Security

Installation, Integration, Value Engineering, Maintenance, Testing and 24/7 Expert Service

Perris Union High School District - PUHSD

Perris HS Camera Additions Phase 2

Proposal # RL-085307

version 1

TRL Systems

When Reliability Counts

Prepared by:
TRL Systems, Inc.

Raymond Lindemans
800-266-1392
Fax 909-390-8397
rlindemans@trlsystems.com

Prepared for:
Perris Union High School District - PUHSD
175 E. Nuevo Rd.
Perris, CA 92571
Hector Gonzalez
(951) 943-6369
hector.gonzalez@puhsd.org

Quote Information:
Quote #: RL-085307

Version: 1
Delivery Date: 03/22/2023
Expiration Date: 04/28/2023

SOW

◇ Scope of Work

Cameras & NVR shall be installed during normal business hours (Monday-Friday)

Proposal includes prevailing wage as required.

NVR & Camera Licenses

TRL systems shall provide and install one (1) new 48TB NVR in IDF location (TBD) and installed in existing data rack and connect to network switch provided by others.

TRL shall program NVR to existing Genetec Master VMS Server and setup AlertPro monitoring connection for TRL NVR monitoring. Additional monitoring fees may apply and be presented direct to PUHSD IT department.

TRL Systems shall furnish and program forty two (42) camera licenses to new NVR. TRL shall fine tune new cameras and final test all camera connections.

Cameras

The following cameras are the most current 6MP versions as the prior 5MP versions are (EOL) End of Life. TRL shall connect these new cameras to the existing Genetec Security Center software version 5.11.

TRL Systems shall provide and install forty two (42) 6MP vandal dome cameras and install at locations identified on attached diagram. All POE switches, IP Addresses, patch cables & port assignment shall be provided by others prior to installation.

TRL shall provide and install camera caps & wall mounts as requested. All conduit, back boxes and Cat 6 cabling is existing and provided by others. TRL has been informed that a man lift is not required for this installation and that none of the camera locations exceed 12FT above ground level mounting height.

TRL has excluded as-built drawings at this time. If PUHSD can provide back ground cad file of site

plans, TRL can provide updated as-built drawings as a change order at the request from the district.

TRL shall evaluate the new NVR once the installation is complete and notify the district of the new retention. Camera shots will be provided for final view approval sign off by the district during the installation

Please note: New cameras proposed are compatible with latest current version 5.11. TRL has contacted and is working with central station (Rapid Response) to insure that their central station monitoring software is up to date and compatible with the latest Genetec version release 5.11. This is to maintain connection for the video verification currently being provided with your security monitoring agreement. This has been addressed with previous versions in the past with success but is a process currently in progress. Additional cost for adding video verification monitoring for the new cameras shall be added as addition to the current monitoring agreement and submitted separately direct to PUHSD IT for final approval if required.

Price Group 1

◇ Materials

Qty	Item	Description	Price	Ext. Price
42	GSC-Om-E-1C	1 Camera Connection	$250.00	$10,500.00
420	ADV-CAM-E-1M	SMA for 1 Omnicast Ent Camera -1M	$4.25	$1,785.00
1	PowerEdge R550	NVR 48TB Server	$8,186.00	$8,186.00
42	XNV-C8083R	6MP IR Outdoor Vandal Dome AI Camera	$998.00	$41,916.00
42	SBP-167HMW	Camera Cap	$35.00	$1,470.00
42	SBP-300WMW1	Wall Mount	$55.00	$2,310.00
1	LOT	Shipping Fees	$830.00	$830.00
1	LOT	TRL Misc Materials	$1,236.00	$1,236.00
1	LOT	Sales Tax	$4,271.65	$4,271.65
			Total:	**$72,504.65**

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◇ Labor

Qty	Item	Description	Price	Ext. Price
1	Labor - Security installation	Labor - Security Installation	$32,400.00	$32,400.00
1	Labor - Project Management	Labor-Project Management	$2,720.00	$2,720.00
1	Labor - PM Programming	Labor - PM Camera Programming	$4,080.00	$4,080.00
1	Labor - IT Engineering	Labor - IT Engineering NVR Programming	$880.00	$880.00
			Total:	**$40,080.00**

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Quote Summary

◇ Detail Breakdown

Description	Amount
Price Group 1	
Materials	$72,504.65
Labor	$40,080.00
Section Subtotal:	$112,584.65
Total:	**$112,584.65**

Clarifications and Exclusions

◇ Exclusions

- All 120 VAC, conduit, back boxes, Cat 6 cable drops
  - Any material or labor not specifically listed as part of this proposal
  - IP/LAN Address
  - Preventative Maintenance
  - Premium Time
- Troubleshooting and repair of existing equipment
  - Painting and patching is excluded
  - Fiber optic cable/connectors/patch panel
  - After normal hours, weekends, or holidays
- POE Network Switches, Cat 6 Patch Panel & patch cables in Local IDF's
  - Any cost related to obtaining a "Waiver of Subrogation"

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Warranty:

TRL Systems provides a standard one (1) year warranty on all parts.

Terms:

All invoices are due and payable to TRL Systems within thirty (30) days of receipt.

All contracts and payment remittance should be addressed to the following location:
TRL Systems, Inc.
9531 Milliken Avenue
Rancho Cucamonga, CA 91730

Please reference this quote number when accepting this proposal.

Acceptance

Signature: _____

Name: _____

Title: _____

Date: _____

PO Number: _____

XNV-C8083R

6MP AI IR Vandal Dome Camera

Network

Key Features

- 6MP resolution
- 4.4~9.3mm (2.1x) motorized varifocal
- Color: 0.04 Lux (F1.3, 1/30sec, 30IRE), 0 Lux (IR LED on)
- Maximum 30 fps (H.265/H.264)
- WiseIR: IR viewable length 40 m (131.23 ft)
- Day & Night (ICR), extremeWDR (120 dB)
- Hard-coated dome bubble
- WiseNR II (Based on AI engine), WiseStream III (Based on AI engine)
- Analytics events based on AI engine (NPU) : Object detection (Person/Face/Vehicle - car, truck, bus, bicycle, motorcycle/License plate),
  IVA (Virtual line/Area, Enter/Exit, Loitering, Direction, Intrusion)
- Analytics events : Defocus detection, Motion detection, Tampering, Fog detection
  Audio detection, Sound classification, Shock detection, Appear/Disappear
- IP66, IP67, NEMA4X, IK10

Compatible Accessories (Optional)

SBP-167HMW

 09-2021

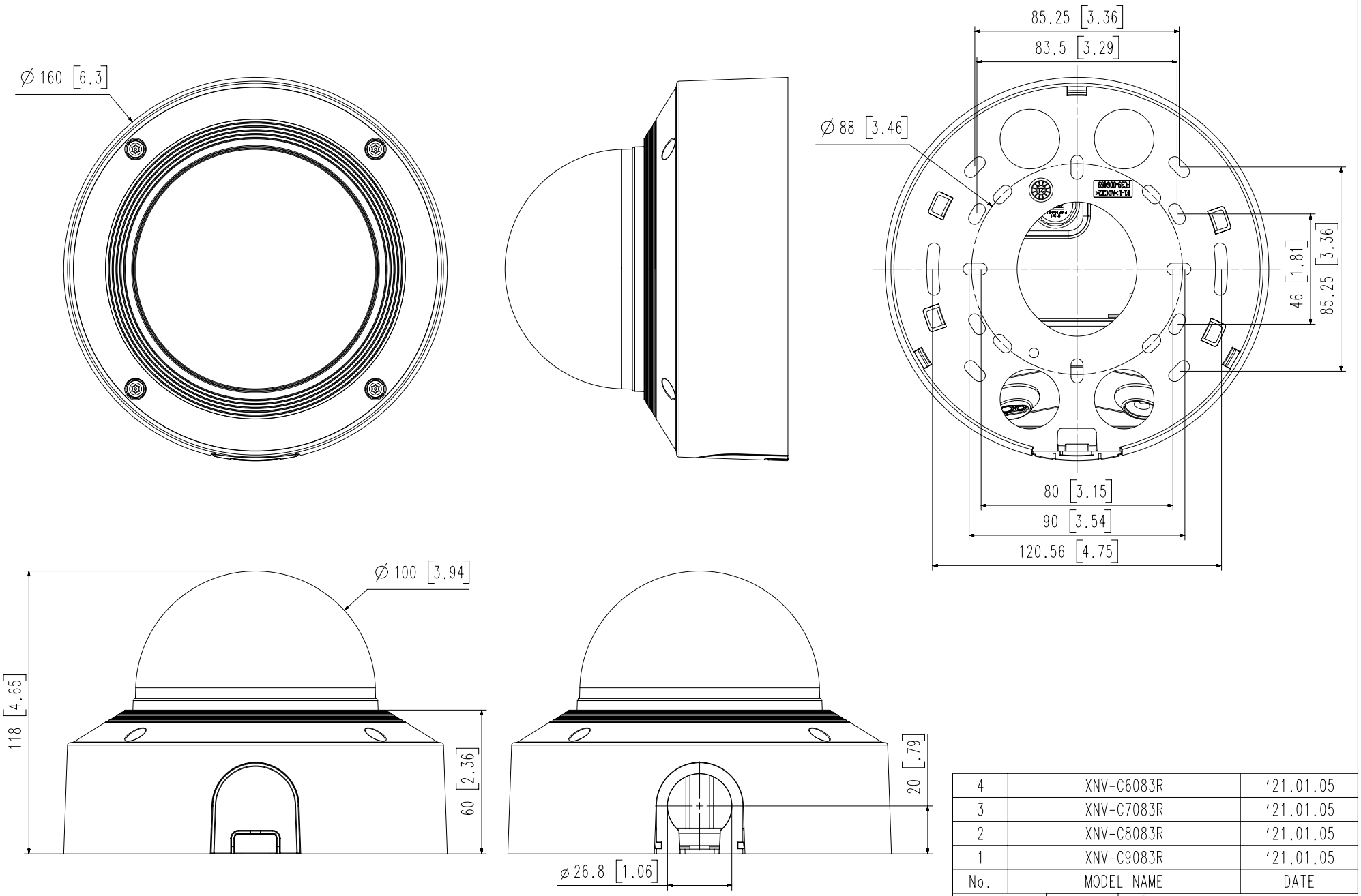
WISENET

Video	
Imaging Device	1/1.8" progressive CMOS
Resolution	3328x1872, 3072x1728, 2592x1944, 2688x1520, 1920x1080, 1600x1200, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240
Max. Framerate	H.265/H.264: Max. 30fps/25fps(60Hz/50Hz) MJPEG: Max. 15fps/12fps(60Hz/50Hz)
Min. Illumination	Color: 0.04Lux(F1.3, 1/30sec, 30IRE) B/W : 0.004Lux(F1.3, 1/30sec, 30IRE), 0Lux(IR LED on)
Video Out	USB: Micro USB Type B, 1280x720 for installation
Lens	
Focal Length (Zoom Ratio)	4.4~9.3mm(2.1x) motorized varifocal
Max. Aperture Ratio	F1.3(Wide) ~ F2.15(Tele)
Angular Field of View	H : 112.1°(Wide)~47.5°(Tele) V : 58.0°(Wide)~26.6°(Tele) D : 137.5°(Wide)~54.6°(Tele)
Min. Object Distance	0.5m(1.64ft)
Focus Control	Simple focus, Manual
Lens Type	P-iris(IR corrected)
Pan / Tilt / Rotate	
Pan / Tilt / Rotate Range	0°~360° / -45°~75° / 0°~355°
Operational	
Camera Title	Displayed up to 85 characters
Day & Night	Auto(ICR)
Backlight Compensation	BLC, HLC, WDR, SSDR
Wide Dynamic Range	extremeWDR (120dB)
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V
Digital Image Stabilization	Support(built-in gyro sensor)
Defog	Support
Motion Detection	8ea, 8point Polygonal zones
Privacy Masking	32ea, Quadrangle zones - Color : Gray, Green, Red, Blue, Black, White - Mosaic
Gain Control	Support
White Balance	ATW / Narrow ATW / AWC / Manual / Indoor / Outdoor
LDC	Support (Fill/stretch mode)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2~1/12,000sec) prefer shutter control(Based on AI engine)
Video Rotation	Flip, Mirror, Hallway view(90°/270°)

Analytics	- Analytics events based on AI engine : Object detection (Person/Face/Vehicle(car/bus/truck/motorcycle/bicycle)/License plate), IVA (Virtual line/Area, Enter/Exit, Loitering, direction, Appear/Disappear, intrusion) - Analytics events : Defocus detection, Motion detection, Tampering, Fog detection, Audio detection, Sound classification, Shock detection
Business Intelligence	Based on AI engine : People counting, Queue management, Heatmap
Alarm I/O	2 configurable I/O ports
Alarm Triggers	Analytics, Network disconnect, Alarm input, App event, Time schedule
Alarm Events	When alarm trigger occurred - File upload(image) : e-mail/FTP - Notification : e-mail - Recording : SD/SDHC/SDXC or NAS recording at event triggers - Alarm output - Handover(PTZ preset, Send message by HTTP/HTTPS/TCP) - Audio clip playback
Audio In	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm
Audio Out	Line out, Max.output level: 1Vrms
IR Viewable Length	WiseIR 40m(131.23ft)
Network	
Ethernet	Metal shielded RJ-45(10/100BASE-T)
Video Compression	H.265/H.264: Main/High, MJPEG
Audio Compression	G.711 u-law /G.726 Selectable G.726(ADPCM) 8KHz, G.711 8KHz G.726: 16Kbps, 24Kbps, 32Kbps, 40Kbps AAC-LC: 48Kbps at 16KHz
Smart Codec	Manual(5ea area), WiseStream II , WiseStream III (Based on AI engine)
Bitrate Control	H.264/H.265: CBR or VBR MJPEG: VBR
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles, 3 virtual channel support)
Protocol	IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP,RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, SRTP (TCP, UDP Unicast)
Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access log 802.1X Authentication(EAP-TLS, EAP-LEAP, EAP-PEAP MSCHAPv2) Device Certificate(Hanwha Techwin Root CA, pre-installed) Secure by default certificate HTPM (Hanwha Trusted platform module) Secure OS/Boot/Storage, Verify firmware forgery CyberSecurity assuarance program UL CAP (UL 2900-1)
Application Programming Interface	ONVIF Profile S/G/T SUNAPI(HTTP API) Wisenet open platform
General	

Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish,, Portuguese, Czech, Polish, Turkish, Dutch, Greek, Hungarian
Edge Storage	Micro SD/SDHC/SDXC 1slot 512GB
Memory	4GB RAM, 512MB Flash
Environmental & Electrical	
Operating Temperature / Humidity	-40°C~+55°C(-40°F ~ +131°F) * Maximum temperature : +60°C (intermittent) * Start up should be done at above -20°C NEMA TS-2 : 74°C 0~95%RH(non-condensing) Humidity control /w GORE vent
Storage Temperature / Humidity	-50°C ~ +60°C(-58°F ~ +140°F) / Less than 90% RH
Certification	IP66/IP67/NEMA4X, IK10
Input Voltage	PoE(IEEE802.3af, Class3), 12VDC
Power Consumption	PoE: Max 12.95W, typical 11.2W 12VDC: Max 13.2W, typical 10.8W
Mechanical	
Color / Material	White / Aluminum Hard-coated dome bubble
RAL Code	RAL9003
Product Dimensions / Weight	Ø160x118mm(Ø6.30x4.65"), 1450g(3.20 lb)
DORI (EN62676-4 standard)	
Detect (25PPM/ 8PPF)	Wide: 44.8m(147.02ft) / Tele: 151.3m(496.29ft)
Observe (63PPM/ 19PPF)	Wide: 17.9m(58.81ft) / Tele: 60.5m(198.52ft)
Recognize (125PPM/ 38PPF)	Wide: 9.0m(29.4ft) / Tele: 30.3m(99.26ft)
Identify (250PPM/ 76PPF)	Wide: 4.5m(14.7ft) / Tele: 15.1m(49.63ft)

- The lastest product information / specification can be found at hanwha-security.com
- Design and specifications are subject to change without notice.
- Wisenet is the proprietary brand of Hanwha Techwin, formerly known as Samsung Techwin.

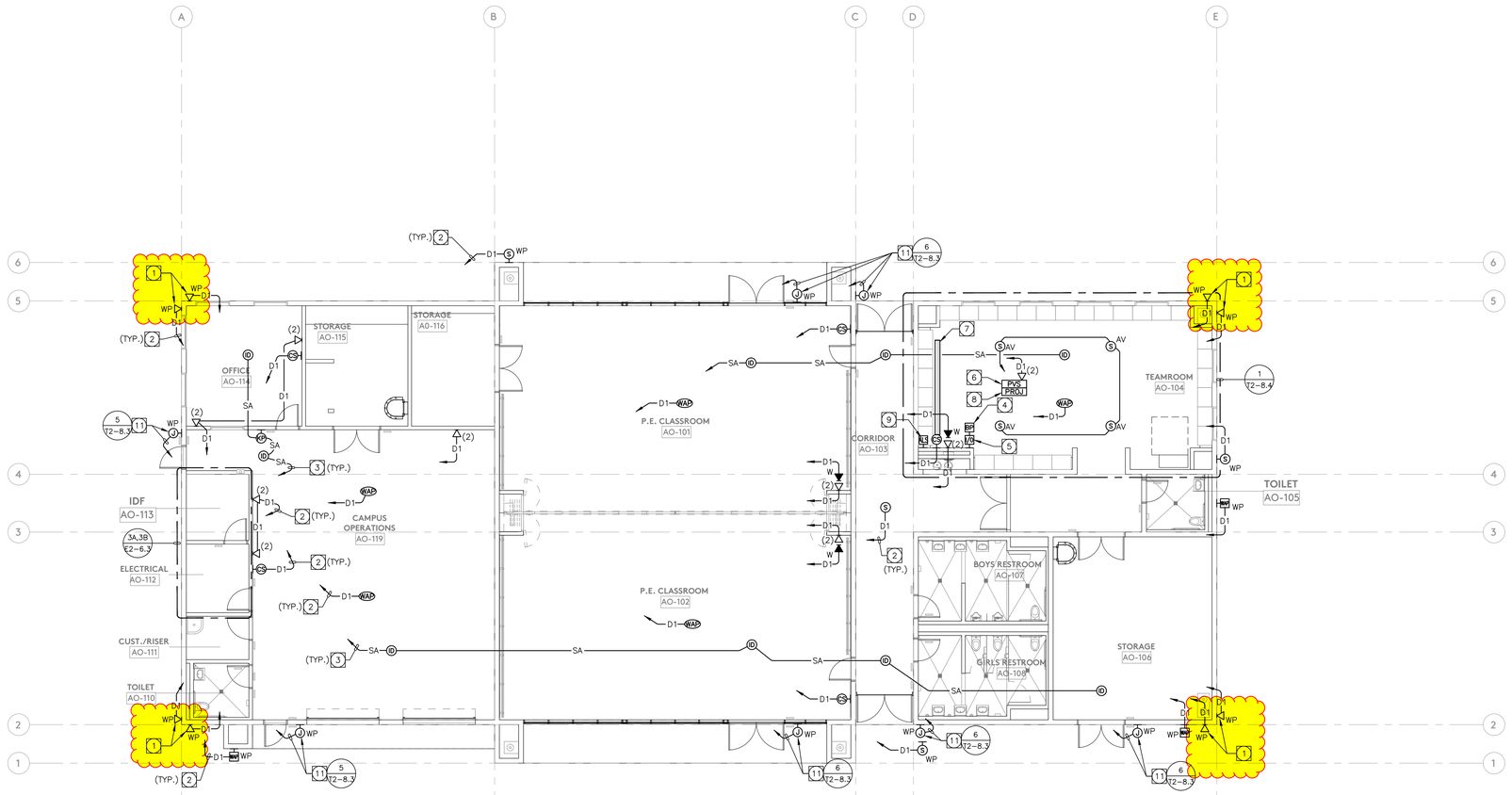


No.	MODEL NAME	DATE
4	XNV-C6083R	'21.01.05
3	XNV-C7083R	'21.01.05
2	XNV-C8083R	'21.01.05
1	XNV-C9083R	'21.01.05

Unit:mm[inch] | SCALE:1/1 | Hanwha Techwin

A2

WISENET



OPERATIONS BUILDING - SIGNAL PLAN

1

1/8" = 1'-0"

PLAN NOTES:

1. MOUNT 6" BELOW PARAPET FLASHING FOR FUTURE CCTV CAMERAS.
2. HOMERUN DATA CONDUIT WITH SPECIFIED CONDUCTORS TO IDF RACK LOCATED IN IDF ROOM.
3. HOMERUN SECURITY CONDUIT WITH SPECIFIED CONDUCTORS TO SECURITY PANEL LOCATED IN IDF ROOM.
4. WALL MOUNTED CONTROL. PROVIDE 3-GANG A/V BOX, MOUNT +44" AFF WITH 1"C. AND SPECIFIED CONDUCTORS TO PVS AND 1"C. WITH SPECIFIED CONDUCTORS TO MOTORIZED SCREEN. REFER TO ARCHITECTURAL CLASSROOM INTERIOR ELEVATIONS.
5. WALL MOUNTED AV INPUT. PROVIDE 2-GANG DEEP, 4S AV BOX AT +18" AFF WITH 1"C. AND SPECIFIED CONDUCTORS TO PVS. REFER TO ARCHITECTURAL CLASSROOM INTERIOR ELEVATIONS.
6. POLE VAULT SYSTEM WITH 120V RECEPTACLE (BY E.C.). VERIFY EXACT LOCATION WITH DISTRICT'S AV CONTRACTOR PRIOR TO ROUGH-IN.
7. MOTORIZED PROJECTION SCREEN. 120V 20AMP (BY E.C.).
8. CEILING MOUNT PROJECTOR WITH 120V 20AMP RECEPTACLE (BY E.C.). REQUIRES 3 AMPS.
9. ALS OUTPUT. PROVIDE SINGLE GANG BACK BOX. PROVIDE 1"C. TO PVS. SEE SPECIFICATIONS FOR ALS SYSTEM AND REQUIREMENTS.
10. 1"C. AV SPEAKER CONDUIT WITH SPECIFIED CONDUCTORS TO PVS.
11. PROVIDE JUNCTION BOX AND CONDUIT(S) FOR FUTURE CARD READER AND ELECTRIC HINGE. HOMERUN 3/4" C.O. TO IDF. REFER TO DOOR DETAIL FOR ADDITIONAL INFORMATION.

COMMUNICATIONS PATHWAYS GENERAL NOTES:

1. CONDUITS SHALL (a) CONTAIN NO CONTINUOUS SECTIONS LONGER THAN 30M (98 FT.), AND (b) CONTAIN NO MORE THAN (2) 90° BENDS OR (1) REVERSE BEND WITHOUT INSTALLING A PULL BOX. SPLIT CONDUITS IN PLACE OF PULL BOXES ARE UNACCEPTABLE.
2. CONDUITS SHALL CONTAIN PLASTIC OR NYLON PULL TAPE RATED AT 200 LBS. WITH A MINIMUM OF 5 FEET OF EXTRA PULL TAPE COILED AT EACH END.
3. CONDUIT BEND RADIUS SHALL BE (a) A MINIMUM OF 6 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS 2-INCHES IN DIAMETER OR LESS, AND (b) 10 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS MORE THAN 2-INCHES IN DIAMETER.
4. TERMINATE CONDUIT STUBS AND SLEEVES THAT PROTRUDE THROUGH STRUCTURAL FLOORS 2-INCHEST TO 3-INCHES ABOVE THE FLOOR SURFACE.
5. INSTALL BUSHINGS OR BELL ENDS AS REQUIRED ON ALL CONDUITS.
6. FLEX CONDUIT IS UNACCEPTABLE FOR USE AS A COMMUNICATIONS CONDUIT EXCEPT AT SEISMIC JOINTS AND/OR IF APPROVED IN WRITING BY THE ENGINEER.
7. ALL UNDER SLAB OR IN-SLAB CONDUITS SHALL BE INSTALLED IN A MANNER THAT PREVENTS WATER INFILTRATION OF THE CONDUIT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE GROUND WATER, RAIN WATER OR CONSTRUCTION WATER IS PREVENTED FROM ENTERING AND/OR REMOVED FROM THE CONDUITS PRIOR TO PLACEMENT OF COMMUNICATIONS CABLES. SEE ELECTRICAL SPECIFICATIONS, DETAILS AND PLANS FOR ADDITIONAL CONDUIT SEALING REQUIREMENTS.
8. ALL PULL BOXES SHALL BE SIZED AND INSTALLED PER ANSI-TIA-569-C. PULL BOXES FOR IN/UNDER SLAB CONDUIT RUNS ARE NOT PERMITTED UNLESS OTHERWISE NOTED. PULL BOXES FOR OVERHEAD CONDUIT RUNS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS WITHIN THE ACCESSIBLE CEILING SPACE AND SUPPORTED INDEPENDENTLY FROM THE STRUCTURE AND CONDUIT SUPPORTS. PULL BOXES FOR ROOF MOUNTED OR EXTERIOR ABOVE GRADE APPLICATIONS SHALL BE NEMA 3R RATED. PULL BOXES SHALL BE SIZED ACCORDING TO THE FOLLOWING:

CONDUIT SIZE	WIDTH	LENGTH	DEPTH	WIDTH INCREASE PER ADDITIONAL CONDUIT
1"	4"	16"	3"	2"
2"	8"	36"	4"	5"
3"	12"	48"	5"	6"
4"	15"	60"	8"	8"

FOR OTHER CONDUIT SIZES REFER TO ANSI/TIA-569-C TABLE 12. - LATEST PUBLISHED EDITION.

9. CONDUIT(S) SHALL EXIT A PULL BOX ON THE WALL OPPOSITE THE WALL ENTERED.
10. PROVIDE LABELING OF EACH CONDUIT PER GENERAL ELECTRICAL SPECIFICATIONS.
11. PROVIDE INTERNAL/EXTERNAL GAS AND WATER TIGHT MECHANICAL SEALING/PLUGGING OF EACH BUILDING ENTRY CONDUIT AS SPECIFIED ELSEWHERE IN THE DRAWINGS AND SPECIFICATIONS.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-118639 INC: 02
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 07/22/2020

pjhm architects
LA Phone: 213.278.0172 • Web: pjhm.com
LA Office: 837 Traction Avenue, #410, Los Angeles, CA 90013
SD Phone: 760.730.5527 • OC Phone: 949.496.6191 • SD Office: 804 Pier View Way #103, Oceanside, CA 92054
OC Office: 24461 Ridge Route Drive #100, Laguna Hills, CA 92653

LICENSED ARCHITECT
THOMAS W. KRUSE
Lic.# C15585
02/21
Renewal Date
STATE OF CALIFORNIA

tksc COLLABORATIVE
11870 Pierce Street, Suite 160
Riverside, California 92505
951.826.1414 | www.tksc.com
Project Leader
Bill Voller
tk1sc Job # 2019-0127

REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. SWANTZ
No. E15610
03/31/2021
ELECTRICAL
STATE OF CALIFORNIA

PERRIS HIGH SCHOOL COMPLETION PHASE

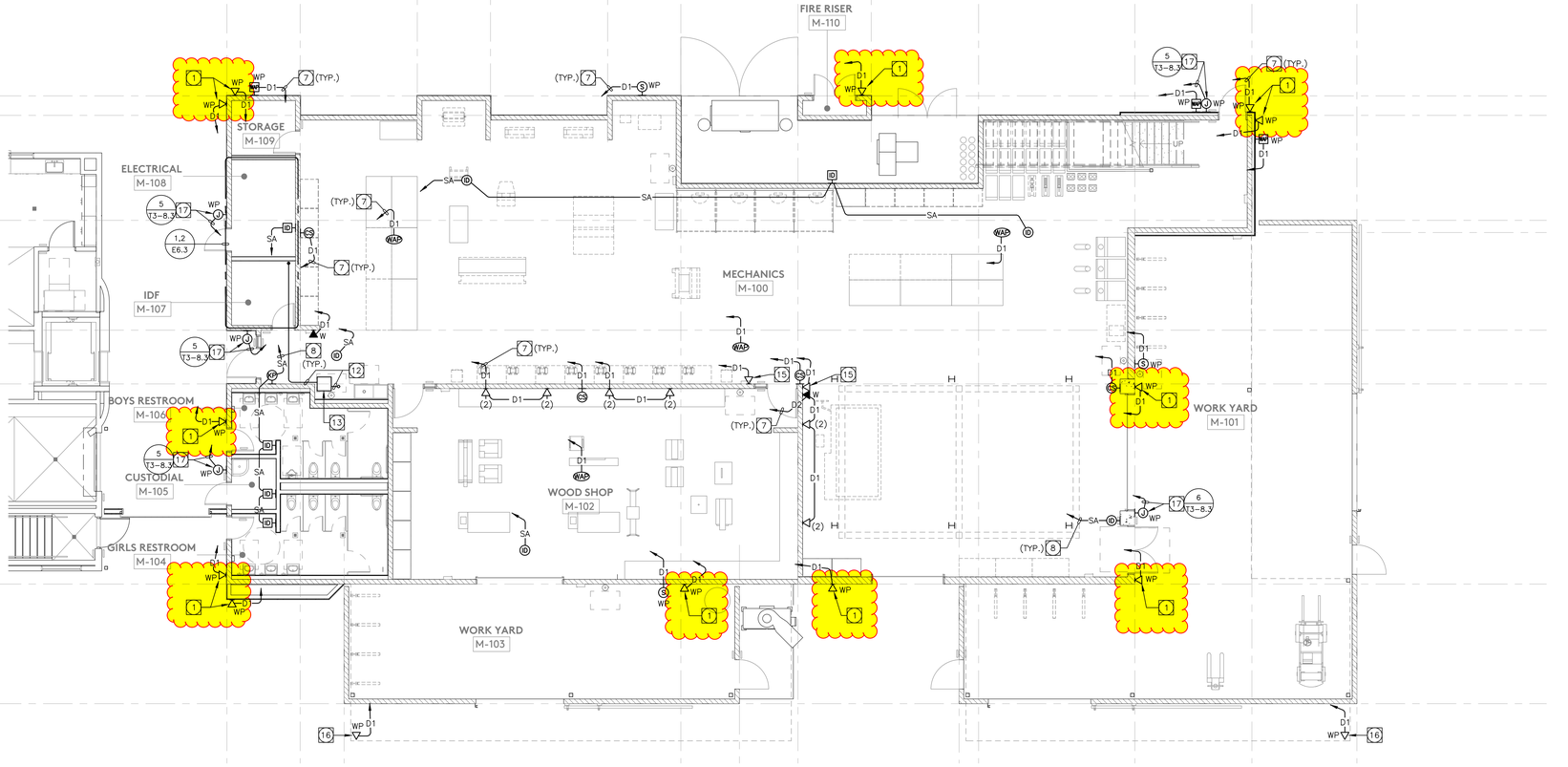
PERRIS UNION HIGH SCHOOL DISTRICT

ATHLETICS/OPERATIONS BUILDING

OPERATIONS
SIGNAL PLAN

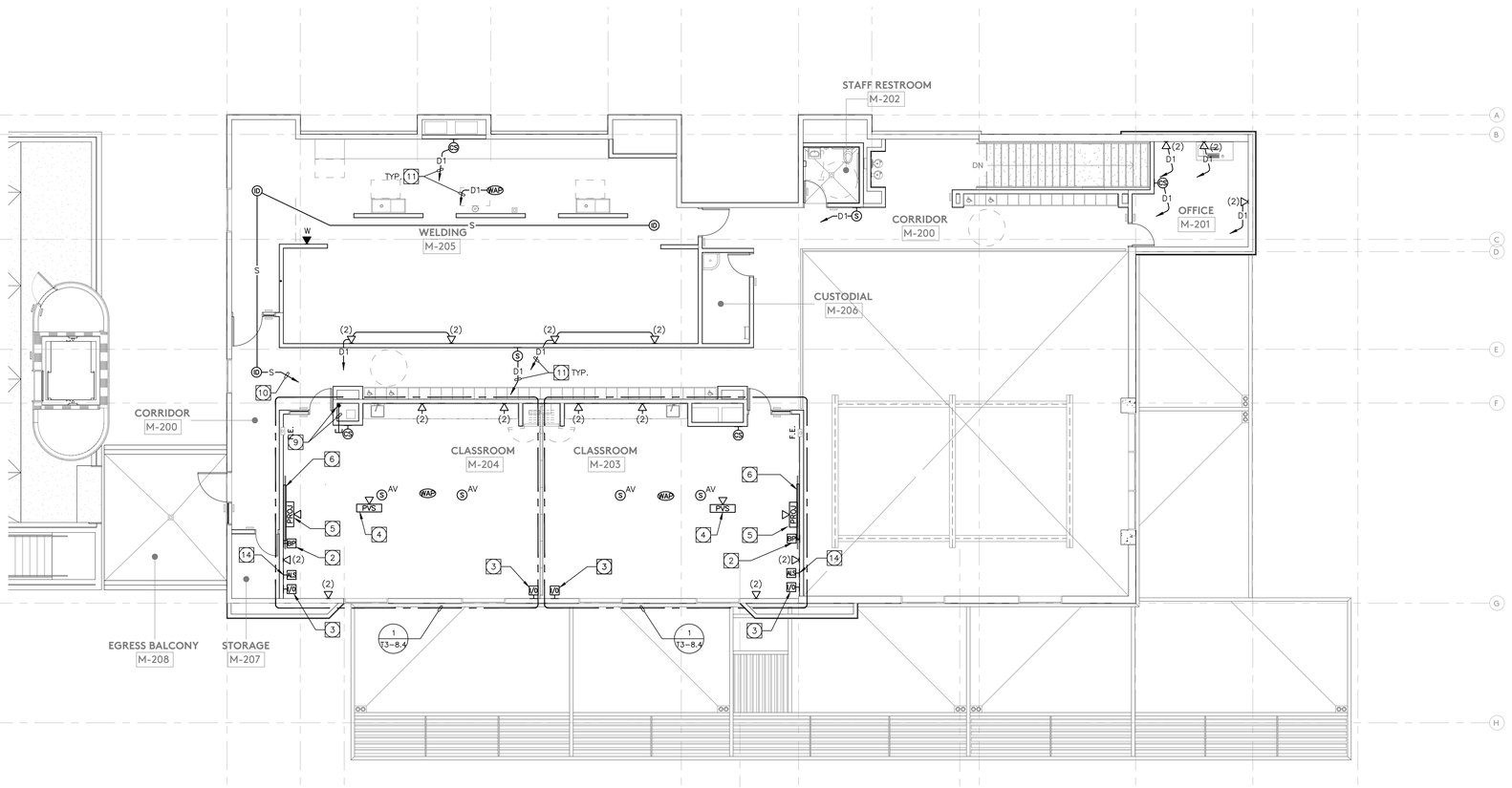
E2-2.3

3/4/2019 7:30:54 AM



AG BUILDING - SIGNAL FLOOR PLAN FIRST FLOOR

1/8" = 1'-0"



AG BUILDING - SIGNAL FLOOR PLAN SECOND FLOOR

1/8" = 1'-0"

3/4/2019 7:30:54 AM

PLAN NOTES:

1. DATA OUTLET FOR FUTURE CCTV CAMERA. SEE EXTERIOR ELEVATIONS FOR MOUNTING HEIGHT.
2. WALL MOUNTED AV CONTROL. PROVIDE 3-GANG DEEP A/V BOX, MOUNT +44" AFF WITH 1"C. AND SPECIFIED CONDUCTORS TO PVS. REFER TO ARCHITECTURAL CLASSROOM INTERIOR ELEVATIONS.
3. WALL MOUNTED AV INPUT. PROVIDE 2-GANG, 4S DEEP AV BOX AT +18" AFF WITH 1"C. AND SPECIFIED CONDUCTORS TO PVS. REFER TO ARCHITECTURAL CLASSROOM INTERIOR ELEVATIONS.
4. PLENUM VAULT SYSTEM WITH 120V RECEPTACLE (BY E.C.). VERIFY EXACT LOCATION WITH DISTRICT'S AV CONTRACTOR PRIOR TO ROUGH-IN.
5. ULTRA SHORT THROW PROJECTOR WITH 120V RECEPTACLE (BY E.C.).
6. PROJECTION SCREEN.
7. HOMERUN DATA CONDUIT WITH SPECIFIED CONDUCTORS TO IDF RACK LOCATED IN IDF ROOM.
8. HOMERUN SECURITY CONDUIT WITH SPECIFIED CONDUCTORS TO SECURITY PANEL LOCATED IN IDF ROOM.
9. PROVIDE THE FOLLOWING SIGNAL SYSTEM VERTICAL CONDUITS WITH CONDUCTORS AS SPECIFIED. CONDUITS ROUTED FROM PULLBOX LOCATED IN 1ST FLOOR OPEN CEILING SPACE:

   1-3" DATA/CLOCK/PA — 1-1" FA
   1-1" INTRUSION — 1-1" SPARE
10. ROUTE SECURITY CONDUIT TO ACCESSIBLE CEILING SPACE ABOVE ACOUSTICAL CEILING.
11. ROUTE DATA CONDUIT TO ACCESSIBLE CEILING SPACE ABOVE ACOUSTICAL CEILING.
12. PROVIDE THE FOLLOWING SIGNAL SYSTEM CONDUITS WITH CONDUCTORS AS SPECIFIED. CONDUITS ROUTED FROM IDF CABLE RUNWAY TO 2ND FLOOR ACCESSIBLE CEILING SPACE ABOVE ACOUSTICAL CEILING:

    1-3" DATA/CLOCK/PA — 1-1" FA
    1-1" INTRUSION — 1-1" SPARE
13. PROVIDE 24"W X 24"L X HEIGHT AS REQUIRED FOR VERTICAL SIGNAL SYSTEM PATHWAYS.
14. ALS OUTPUT. PROVIDE SINGLE GANG BACK BOX. PROVIDE 1" C TO PVS. SEE SPECIFICATIONS FOR ALS SYSTEM AND REQUIREMENTS.
15. DATA OUTLET FOR FUTURE CCTV CAMERA. MOUNT @ +108" A.F.F.
16. DATA OUTLET FOR FUTURE CCTV CAMERA. MOUNT UNDER CANOPY.
17. PROVIDE JUNCTION BOX AND CONDUIT(S) FOR FUTURE CARD READER AND ELECTRIC HINGE. HOMERUN 3/4" C.O. TO IDF. REFER TO DOOR DETAIL FOR ADDITIONAL INFORMATION.

COMMUNICATIONS PATHWAYS GENERAL NOTES:

1. CONDUITS SHALL (a) CONTAIN NO CONTINUOUS SECTIONS LONGER THAN 30M (98 FT.), AND (b) CONTAIN NO MORE THAN (2) 90° BENDS OR (1) REVERSE BEND WITHOUT INSTALLING A PULL BOX. SPLIT CONDUITS IN PLACE OF PULL BOXES ARE UNACCEPTABLE.
2. CONDUITS SHALL CONTAIN PLASTIC OR NYLON PULL TAPE RATED AT 200 LBS. WITH A MINIMUM OF 5 FEET OF EXTRA PULL TAPE COILED AT EACH END.
3. CONDUIT BEND RADIUS SHALL BE (a) A MINIMUM OF 6 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS 2-INCHES IN DIAMETER OR LESS, AND (b) 10 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS MORE THAN 2-INCHES IN DIAMETER.
4. TERMINATE CONDUIT STUBS AND SLEEVES THAT PROTRUDE THROUGH STRUCTURAL FLOORS 2-INCHEST TO 3-INCHES ABOVE THE FLOOR SURFACE.
5. INSTALL BUSHINGS OR BELL ENDS AS REQUIRED ON ALL CONDUITS.
6. FLEX CONDUIT IS UNACCEPTABLE FOR USE AS A COMMUNICATIONS CONDUIT EXCEPT AT SEISMIC JOINTS AND/OR IF APPROVED IN WRITING BY THE ENGINEER.
7. ALL UNDER SLAB OR IN-SLAB CONDUITS SHALL BE INSTALLED IN A MANNER THAT PREVENTS WATER INFILTRATION OF THE CONDUIT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE GROUND WATER, RAIN WATER OR CONSTRUCTION WATER IS PREVENTED FROM ENTERING AND/OR REMOVED FROM THE CONDUITS PRIOR TO PLACEMENT OF COMMUNICATIONS CABLES. SEE ELECTRICAL SPECIFICATIONS, DETAILS AND PLANS FOR ADDITIONAL CONDUIT SEALING REQUIREMENTS.
8. ALL PULL BOXES SHALL BE SIZED AND INSTALLED PER ANSI-TIA-569-C. PULL BOXES FOR IN/UNDER SLAB CONDUIT RUNS ARE NOT PERMITTED UNLESS OTHERWISE NOTED. PULL BOXES FOR OVERHEAD CONDUIT RUNS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS WITHIN THE ACCESSIBLE CEILING SPACE AND SUPPORTED INDEPENDENTLY FROM THE STRUCTURE AND CONDUIT SUPPORTS. PULL BOXES FOR ROOF MOUNTED OR EXTERIOR ABOVE GRADE APPLICATIONS SHALL BE NEMA 3R RATED. PULL BOXES SHALL BE SIZED ACCORDING TO THE FOLLOWING:

CONDUIT SIZE	WIDTH	LENGTH	DEPTH	WIDTH INCREASE PER ADDITIONAL CONDUIT
1"	4"	16"	3"	2"
2"	8"	36"	4"	5"
3"	12"	48"	5"	6"
4"	15"	60"	8"	8"

   FOR OTHER CONDUIT SIZES REFER TO ANSI/TIA-569-C TABLE 12. - LATEST PUBLISHED EDITION.
9. CONDUIT(S) SHALL EXIT A PULL BOX ON THE WALL OPPOSITE THE WALL ENTERED.
10. PROVIDE LABELING OF EACH CONDUIT PER GENERAL ELECTRICAL SPECIFICATIONS.
11. PROVIDE INTERNAL/EXTERNAL GAS AND WATER TIGHT MECHANICAL SEALING/PLUGGING OF EACH BUILDING ENTRY CONDUIT AS SPECIFIED ELSEWHERE IN THE DRAWINGS AND SPECIFICATIONS.

IDENTIFICATION STAMP
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APP: 04-118639 INC: 02
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 07/22/2020

pjhm architects
LICENSED ARCHITECT
THOMAS W. KRUSE
Lic.# C15585
02/21
Renewal Date
STATE OF CALIFORNIA

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951.826.0414 www.tksc.com
Project Leader
Bill Voller
tk1sc Job # 2019-0127

REGISTERED PROFESSIONAL ENGINEER
RAYMOND W. SWANTZ
No. E15610
12/31/2021
ELECTRICAL
STATE OF CALIFORNIA

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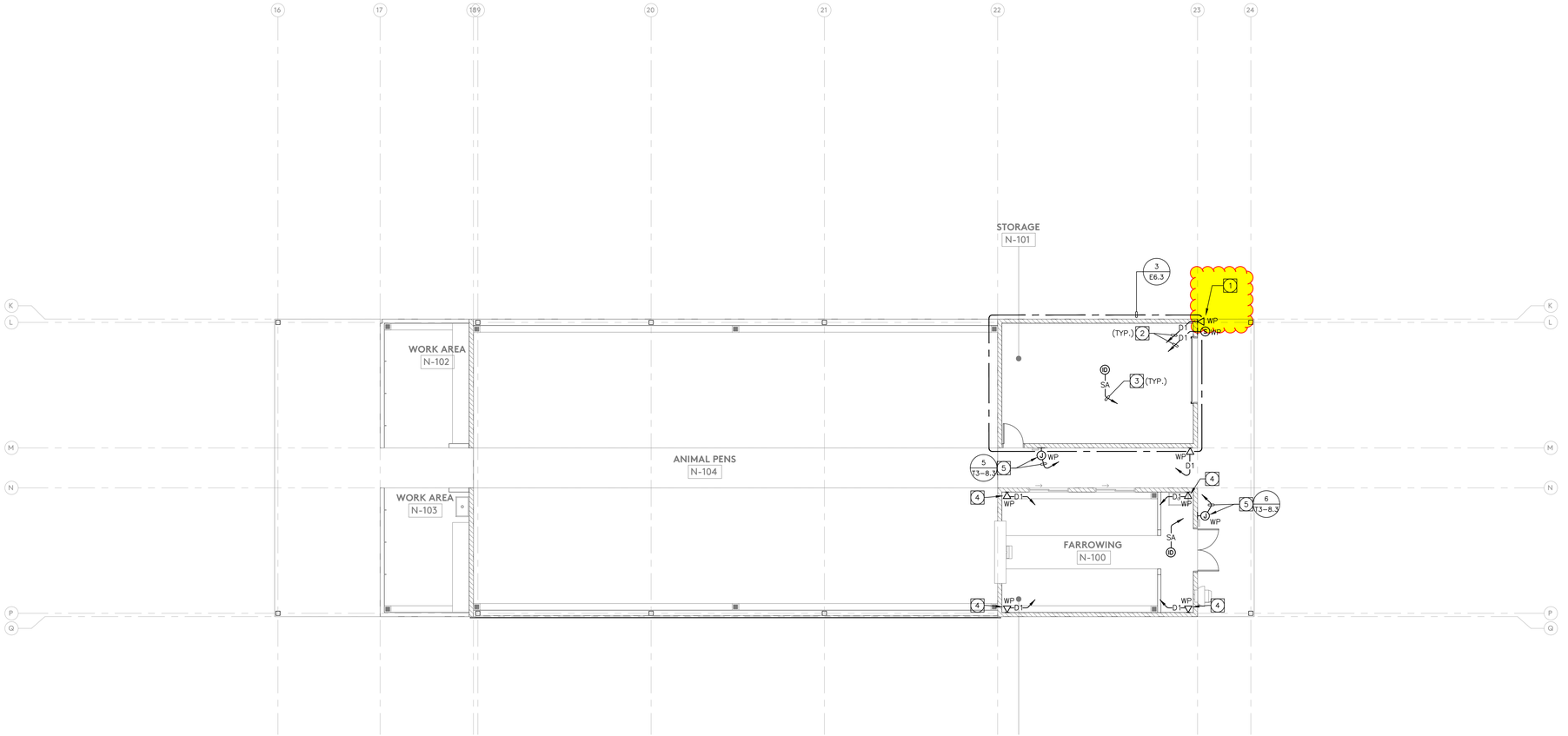
PERRIS HIGH SCHOOL COMPLETION PHASE

PERRIS UNION HIGH SCHOOL DISTRICT

SIGNAL PLANS

BUILDINGS 'AG MECH' & 'AG BARN'

E3-4.1



BARN BUILDING - SIGNAL FLOOR PLAN

1/8" = 1'-0"

PLAN NOTES:

1. DATA OUTLET FOR FUTURE CCTV CAMERA. SEE EXTERIOR ELEVATIONS FOR MOUNTING HEIGHT.
2. HOMERUN DATA CONDUIT WITH SPECIFIED CONDUCTORS TO IDF RACK LOCATED IN IDF ROOM.
3. HOMERUN SECURITY CONDUIT WITH SPECIFIED CONDUCTORS TO SECURITY PANEL LOCATED IN IDF ROOM.
4. DATA OUTLET FOR FUTURE CCTV CAMERA. MOUNT @ +108" A.F.F.
5. PROVIDE JUNCTION BOX AND CONDUIT(S) FOR FUTURE CARD READER AND ELECTRIC HINGE. HOMERUN 3/4" C.O. TO IDF. REFER TO DOOR DETAIL FOR ADDITIONAL INFORMATION.

COMMUNICATIONS PATHWAYS GENERAL NOTES:

1. CONDUITS SHALL (a) CONTAIN NO CONTINUOUS SECTIONS LONGER THAN 30M (98 FT.), AND (b) CONTAIN NO MORE THAN (2) 90° BENDS OR (1) REVERSE BEND WITHOUT INSTALLING A PULL BOX. SPLIT CONDUITS IN PLACE OF PULL BOXES ARE UNACCEPTABLE.
2. CONDUITS SHALL CONTAIN PLASTIC OR NYLON PULL TAPE RATED AT 200 LBS. WITH A MINIMUM OF 5 FEET OF EXTRA PULL TAPE COILED AT EACH END.
3. CONDUIT BEND RADIUS SHALL BE (a) A MINIMUM OF 6 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS 2–INCHES IN DIAMETER OR LESS, AND (b) 10 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS MORE THAN 2–INCHES IN DIAMETER.
4. TERMINATE CONDUIT STUBS AND SLEEVES THAT PROTRUDE THROUGH STRUCTURAL FLOORS 2–INCHEST TO 3–INCHES ABOVE THE FLOOR SURFACE.
5. INSTALL BUSHINGS OR BELL ENDS AS REQUIRED ON ALL CONDUITS.
6. FLEX CONDUIT IS UNACCEPTABLE FOR USE AS A COMMUNICATIONS CONDUIT EXCEPT AT SEISMIC JOINTS AND/OR IF APPROVED IN WRITING BY THE ENGINEER.
7. ALL UNDER SLAB OR IN–SLAB CONDUITS SHALL BE INSTALLED IN A MANNER THAT PREVENTS WATER INFILTRATION OF THE CONDUIT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE GROUND WATER, RAIN WATER OR CONSTRUCTION WATER IS PREVENTED FROM ENTERING AND/OR REMOVED FROM THE CONDUITS PRIOR TO PLACEMENT OF COMMUNICATIONS CABLES. SEE ELECTRICAL SPECIFICATIONS, DETAILS AND PLANS FOR ADDITIONAL CONDUIT SEALING REQUIREMENTS.
8. ALL PULL BOXES SHALL BE SIZED AND INSTALLED PER ANSI–TIA–569–C. PULL BOXES FOR IN/UNDER SLAB CONDUIT RUNS ARE NOT PERMITTED UNLESS OTHERWISE NOTED. PULL BOXES FOR OVERHEAD CONDUIT RUNS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS WITHIN THE ACCESSIBLE CEILING SPACE AND SUPPORTED INDEPENDENTLY FROM THE STRUCTURE AND CONDUIT SUPPORTS. PULL BOXES FOR ROOF MOUNTED OR EXTERIOR ABOVE GRADE APPLICATIONS SHALL BE NEMA 3R RATED. PULL BOXES SHALL BE SIZED ACCORDING TO THE FOLLOWING:

CONDUIT SIZE	WIDTH	LENGTH	DEPTH	WIDTH INCREASE PER ADDITIONAL CONDUIT
1"	4"	16"	3"	2"
2"	8"	36"	4"	5"
3"	12"	48"	5"	6"
4"	15"	60"	8"	8"

FOR OTHER CONDUIT SIZES REFER TO ANSI/TIA–569–C TABLE 12. – LATEST PUBLISHED EDITION.

9. CONDUIT(S) SHALL EXIT A PULL BOX ON THE WALL OPPOSITE THE WALL ENTERED.
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11. PROVIDE INTERNAL/EXTERNAL GAS AND WATER TIGHT MECHANICAL SEALING/PLUGGING OF EACH BUILDING ENTRY CONDUIT AS SPECIFIED ELSEWHERE IN THE DRAWINGS AND SPECIFICATIONS.

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PERRIS HIGH SCHOOL COMPLETION PHASE

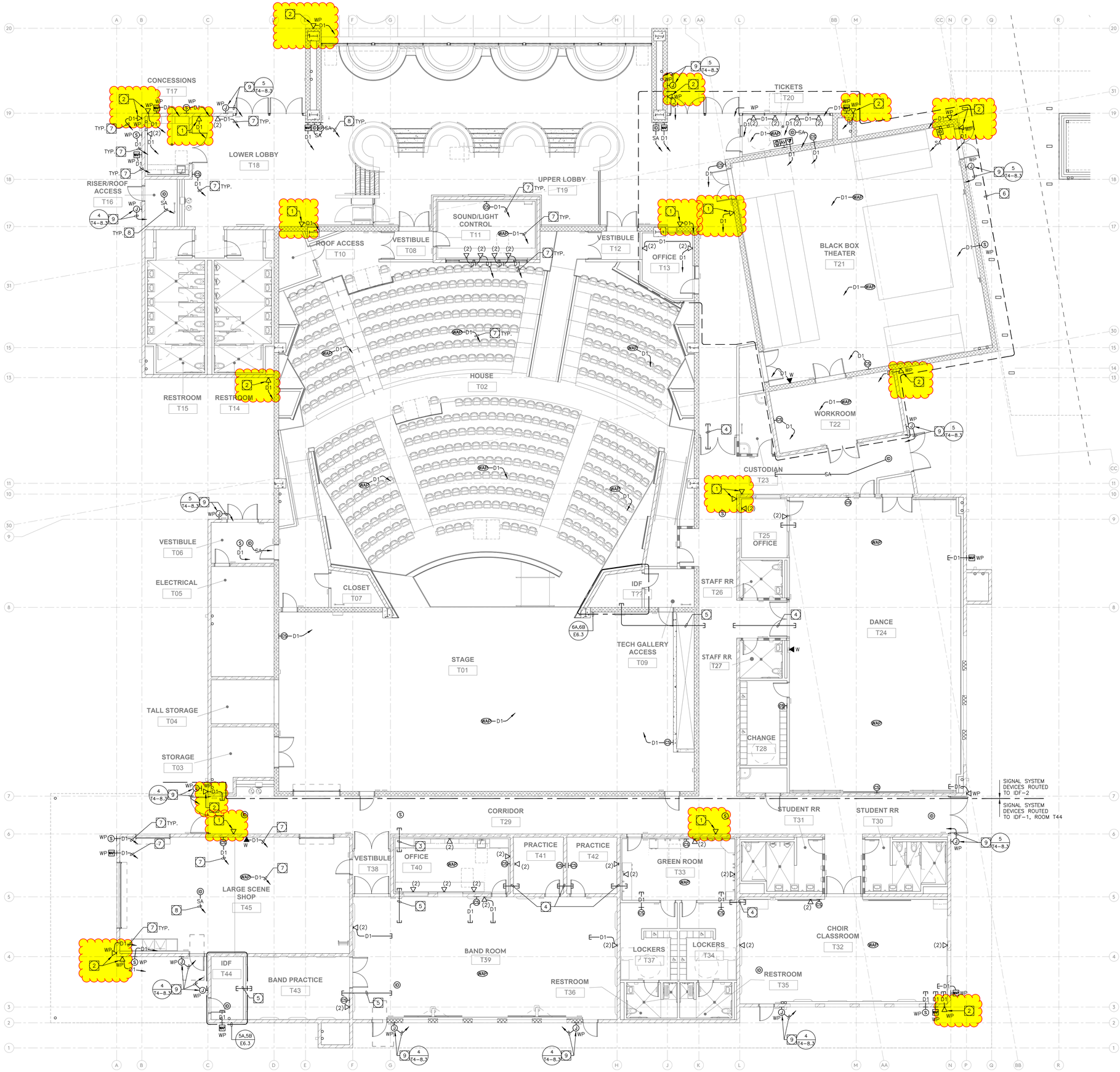
PERRIS UNION HIGH SCHOOL DISTRICT

BUILDINGS 'AG MECH' & 'AG BARN'

BARN BUILDING
SIGNAL PLAN

E3-4.2

3/4/2019 7:30:54 AM



PLAN NOTES:

1. DATA OUTLET FOR FUTURE CCTV CAMERA. VERIFY MOUNTING HEIGHT IN FEILD.
2. DATA OUTLET FOR FUTURE CCTV CAMERA. SEE EXTERIOR ELEVATIONS FOR MOUNTING HEIGHT.
3. PROVIDE THE FOLLOWING SIGNAL SYSTEM CONDUIT SLEEVES WITH CONDUCTORS AS SPECIFIED:

   1–1" DATA/CLOCK/PA 1–1" FA
   1–1" INTRUSION 1–1" SPARE
4. PROVIDE THE FOLLOWING SIGNAL SYSTEM CONDUIT SLEEVES WITH CONDUCTORS AS SPECIFIED:

   1–2" DATA/CLOCK/PA 1–1" FA
   1–1" INTRUSION 1–1" SPARE
5. PROVIDE THE FOLLOWING SIGNAL SYSTEM CONDUIT SLEEVES WITH CONDUCTORS AS SPECIFIED:

   2–2" DATA/CLOCK/PA 1–1" FA
   1–1" INTRUSION 1–1" SPARE
6. SIGNAL SYSTEM DEVICE LOCATIONS IN DASHED LINE ROUTE CONDUITS TO ACCESSIBLE CEILING SPACE ABOVE ACOUSTICAL CEILING.
7. HOMERUN DATA CONDUIT WITH SPECIFIED CONDUCTORS TO IDF RACK LOCATED IN IDF ROOM.
8. HOMERUN SECURITY CONDUIT WITH SPECIFIED CONDUCTORS TO SECURITY PANEL LOCATED IN IDF ROOM.
9. PROVIDE JUNCTION BOX AND CONDUIT(S) FOR FUTURE CARD READER AND ELECTRIC HINGE. PROVIDE 3/4" C.O. TO ACCESSIBLE CEILING SPACE ABOVE ACOUSTIC CEILING. REFER TO DOOR DETAIL FOR ADDITIONAL INFORMATION.

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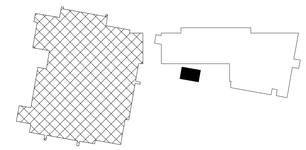
VAPA BUILDING ADMIN BUILDING



KEY PLAN

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PERRIS HIGH SCHOOL COMPLETION PHASE

PERRIS UNION HIGH SCHOOL DISTRICT

ADMIN AND VAPA BUILDING

VAPA BUILDING
SIGNAL PLAN

E4-4.3

3/4/2019 7:30:54 AM

VAPA BUILDING - SIGNAL FLOOR PLAN

1/8" = 1'-0"