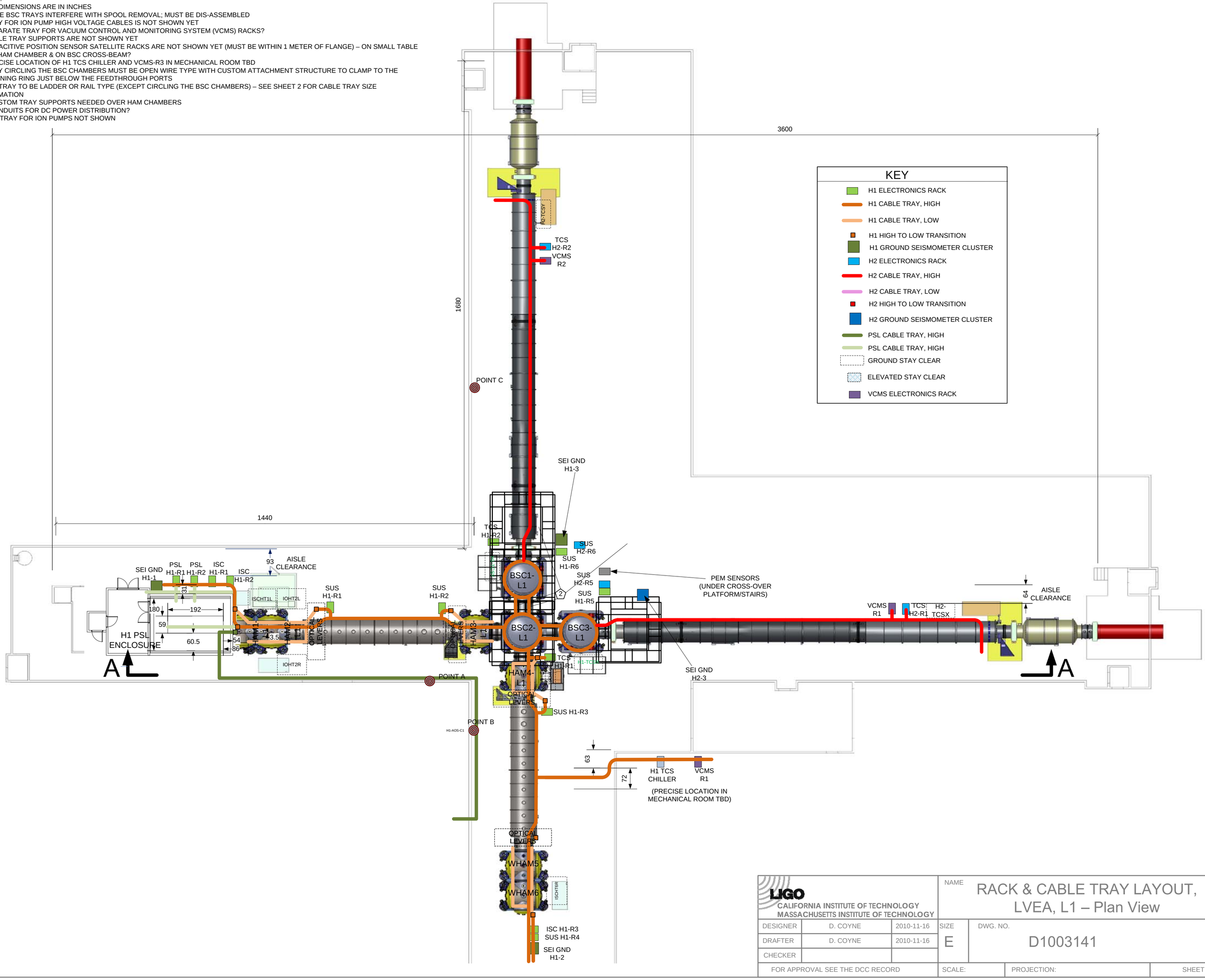
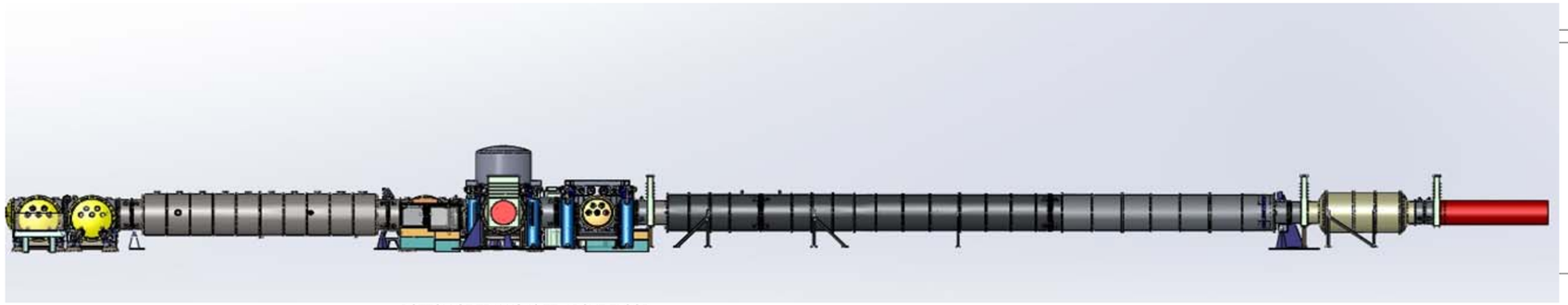
NOTES:
1) ALL DIMENSIONS ARE IN INCHES
2) SOME BSC TRAYS INTERFERE WITH SPOOL REMOVAL; MUST BE DIS-ASSEMBLED
3) TRAY FOR ION PUMP HIGH VOLTAGE CABLES IS NOT SHOWN YET
4) SEPARATE TRAY FOR VACUUM CONTROL AND MONITORING SYSTEM (VCMS) RACKS?
5) CABLE TRAY SUPPORTS ARE NOT SHOWN YET
6) CAPACITIVE POSITION SENSOR SATELLITE RACKS ARE NOT SHOWN YET (MUST BE WITHIN 1 METER OF FLANGE) – ON SMALL TABLE NEAR HAM CHAMBER & ON BSC CROSS-BEAM?
7) PRECISE LOCATION OF H1 TCS CHILLER AND VCMS-R3 IN MECHANICAL ROOM TBD
8) TRAY CIRCLING THE BSC CHAMBERS MUST BE OPEN WIRE TYPE WITH CUSTOM ATTACHMENT STRUCTURE TO CLAMP TO THE STIFFENING RING JUST BELOW THE FEEDTHROUGH PORTS
9) ALL TRAY TO BE LADDER OR RAIL TYPE (EXCEPT CIRCLING THE BSC CHAMBERS) – SEE SHEET 2 FOR CABLE TRAY SIZE INFORMATION
10) CUSTOM TRAY SUPPORTS NEEDED OVER HAM CHAMBERS
11) CONDUITS FOR DC POWER DISTRIBUTION?
12) HV TRAY FOR ION PUMPS NOT SHOWN



LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY			NAME	RACK & CABLE TRAY LAYOUT, LVEA, L1 – Plan View	
DESIGNER	D. COYNE	2010-11-16	SIZE	DWG. NO.	REV
DRAFTER	D. COYNE	2010-11-16	E	D1003141	V2
CHECKER					
FOR APPROVAL SEE THE DCC RECORD			SCALE:	PROJECTION:	SHEET 1 OF 5



BOTTOM OF TRAY IS 10 FT. ABOVE FLOOR.

SECTION A-A

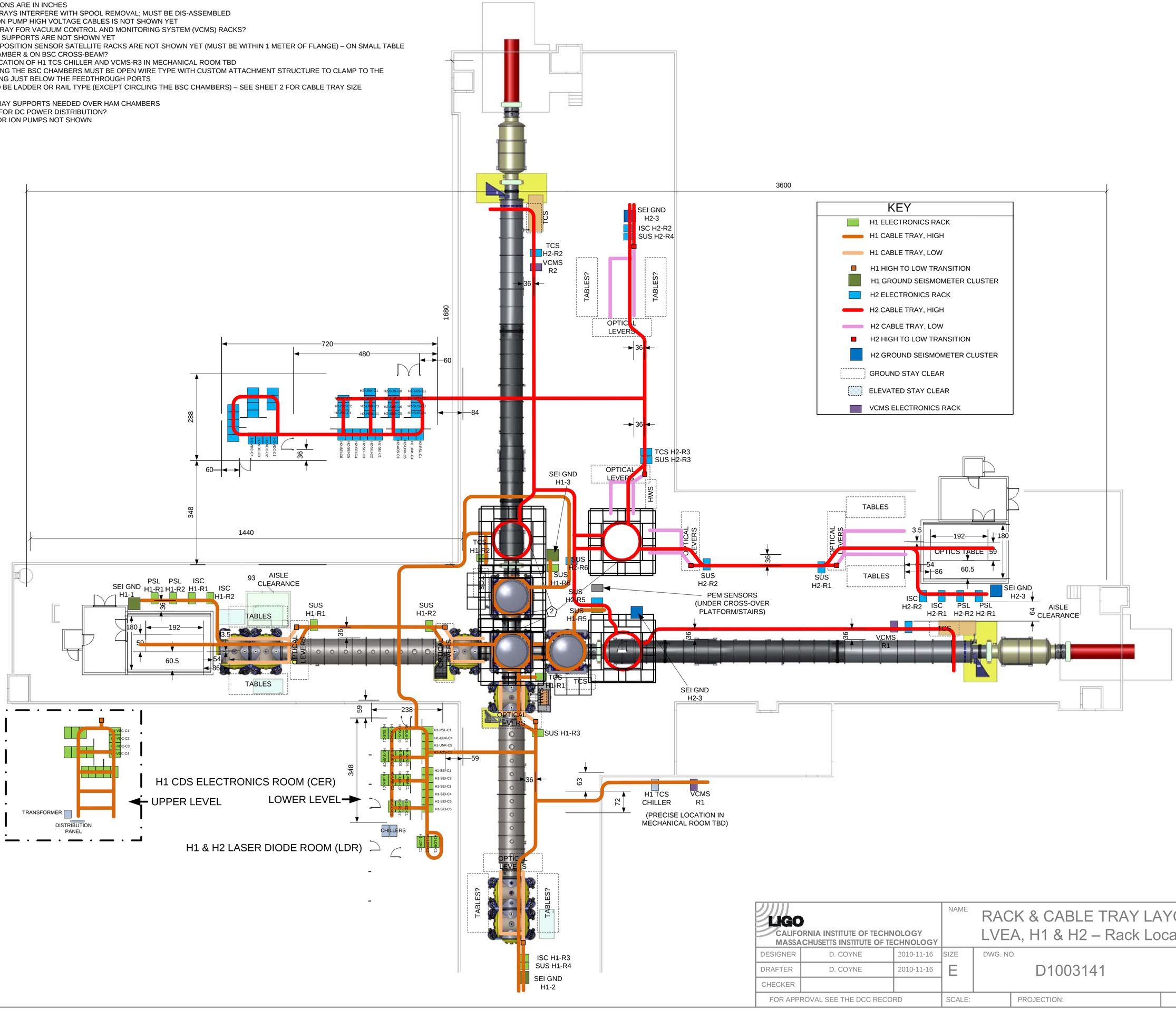
NOTE: CABLE TRAY IS ONLY SHOWN ALONG THE H1 A-ARM FOR CLARITY.

SECTION A-A

NOTE: CABLE TRAY IS ONLY SHOWN ALONG THE H1 A-ARM FOR CLARITY.

LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY			NAME	RACK & CABLE TRAY LAYOUT, LVEA, H1 & H2 -- Elevations	
DESIGNER	D. COYNE	2010-11-16	SIZE	DWG. NO.	REV
DRAFTER	D. COYNE	2010-11-16	E	D1003141	V2
CHECKER					
FOR APPROVAL SEE THE DCC RECORD			SCALE:	PROJECTION:	SHEET 2 OF 5

NOTES:
1) ALL DIMENSIONS ARE IN INCHES
2) SOME BSC TRAYS INTERFERE WITH SPOOL REMOVAL; MUST BE DIS-ASSEMBLED
3) TRAY FOR ION PUMP HIGH VOLTAGE CABLES IS NOT SHOWN YET
4) SEPARATE TRAY FOR VACUUM CONTROL AND MONITORING SYSTEM (VCMS) RACKS?
5) CABLE TRAY SUPPORTS ARE NOT SHOWN YET
6) CAPACITIVE POSITION SENSOR SATELLITE RACKS ARE NOT SHOWN YET (MUST BE WITHIN 1 METER OF FLANGE) – ON SMALL TABLE NEAR HAM CHAMBER & ON BSC CROSS-BEAM?
7) PRECISE LOCATION OF H1 TCS CHILLER AND VCMS-R3 IN MECHANICAL ROOM TBD
8) TRAY CIRCLING THE BSC CHAMBERS MUST BE OPEN WIRE TYPE WITH CUSTOM ATTACHMENT STRUCTURE TO CLAMP TO THE STIFFENING RING JUST BELOW THE FEEDTHROUGH PORTS
9) ALL TRAY TO BE LADDER OR RAIL TYPE (EXCEPT CIRCLING THE BSC CHAMBERS) – SEE SHEET 2 FOR CABLE TRAY SIZE INFORMATION
10) CUSTOM TRAY SUPPORTS NEEDED OVER HAM CHAMBERS
11) CONDUITS FOR DC POWER DISTRIBUTION?
12) HV TRAY FOR ION PUMPS NOT SHOWN



LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY			NAME	RACK & CABLE TRAY LAYOUT, LVEA, H1 & H2 – Rack Locations
DESIGNER	D. COYNE	2010-11-16	SIZE: E	DWG. NO.: D1003141
DRAFTER	D. COYNE	2010-11-16		REV: V2
CHECKER				
FOR APPROVAL SEE THE DCC RECORD			SCALE:	PROJECTION: SHEET 3 OF 5

NOTES:
1) ALL DIMENSIONS ARE IN INCHES
2) SOME BSC TRAYS INTERFERE WITH SPOOL REMOVAL; MUST BE DIS-ASSEMBLED
3) TRAY FOR ION PUMP HIGH VOLTAGE CABLES IS NOT SHOWN YET
4) SEPARATE TRAY FOR VACUUM CONTROL AND MONITORING SYSTEM (VCMS) RACKS?
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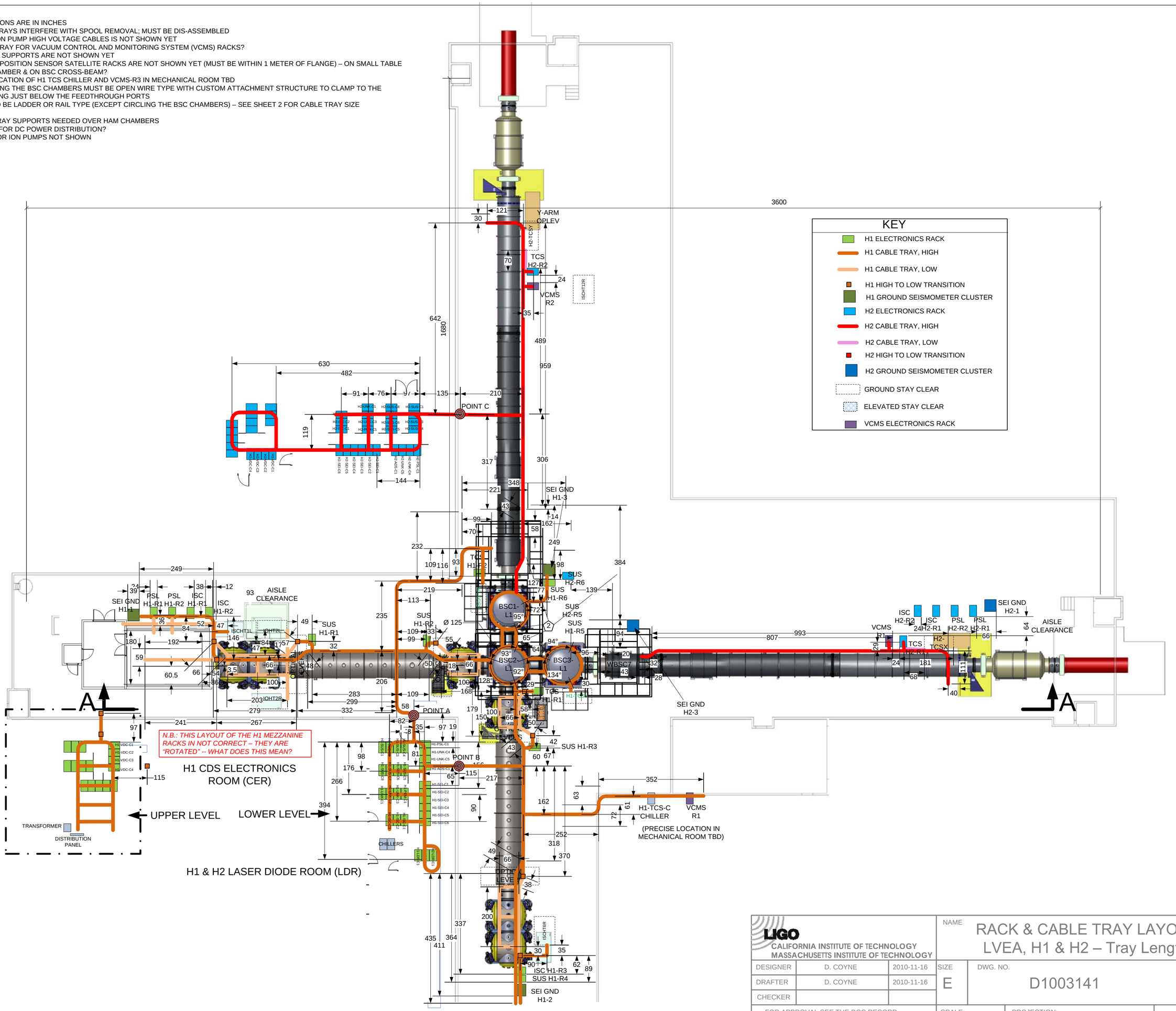
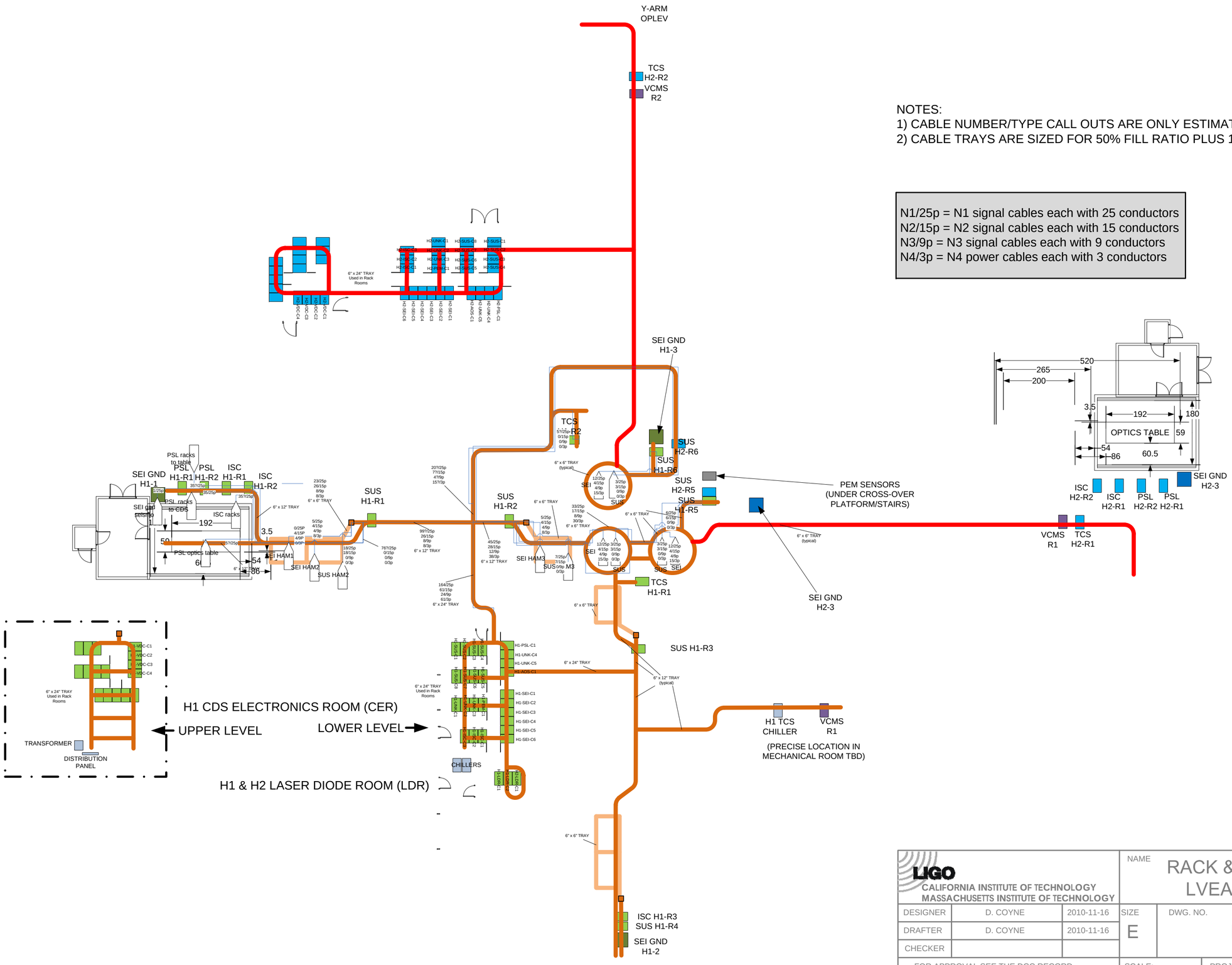
9) ALL TRAY TO BE LADDER OR RAIL TYPE (EXCEPT CIRCLING THE BSC CHAMBERS) – SEE SHEET 2 FOR CABLE TRAY SIZE INFORMATION
10) CUSTOM TRAY SUPPORTS NEEDED OVER HAM CHAMBERS
11) CONDUITS FOR DC POWER DISTRIBUTION?
12) HV TRAY FOR ION PUMPS NOT SHOWN



LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY			NAME	RACK & CABLE TRAY LAYOUT, LVEA, H1 & H2 – Tray Lengths	
DESIGNER	D. COYNE	2010-11-16	SIZE	DWG. NO.	REV
DRAFTER	D. COYNE	2010-11-16	E	D1003141	V2
CHECKER					
FOR APPROVAL SEE THE DCC RECORD			SCALE:	PROJECTION:	SHEET 4 OF 5



NOTES:
1) CABLE NUMBER/TYPE CALL OUTS ARE ONLY ESTIMATES.
2) CABLE TRAYS ARE SIZED FOR 50% FILL RATIO PLUS 100% SPARE CAPACITY

N1/25p = N1 signal cables each with 25 conductors
N2/15p = N2 signal cables each with 15 conductors
N3/9p = N3 signal cables each with 9 conductors
N4/3p = N4 power cables each with 3 conductors

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NAME: RACK & CABLE TRAY LAYOUT, LVEA, H1 & H2 – Tray Sizes

DESIGNER	D. COYNE	2010-11-16	SIZE	DWG. NO.	REV
DRAFTER	D. COYNE	2010-11-16	E	D1003141	V2
CHECKER					
FOR APPROVAL SEE THE DCC RECORD			SCALE:	PROJECTION:	SHEET 5 OF 5