

FREER White Paper – LED lighting Retrofits

Excluded (E) FR-E-ER projects may or may not require submission of the HCAI-OSH102 form as indicated in the Project Table located in Section IX. HCAI-OSH-102 form is available for download from the OSHPD web page at: <https://www.oshpd.ca.gov/Forms/HCAI-OSH-102>. If the scope of work is outside of OSHPD jurisdiction (see CAN 2-0), Excluded projects may be subject to review and permitting by the local authority having jurisdiction.

Field Review (FR) FR-E-ER projects shall submit a project to OSHPD and contact the field staff to schedule a FREER field plan review appointment. The project plans, specifications and Testing, Inspection and Observation program (TIO) for the construction project under an Application for New Project. This can be done electronically through the e-Services Portal (<https://esp.oshpd.ca.gov>) or, by submitting the required paper documents to the office serving your facility. Projects submitted under the FREER process that are outside of the scope of the project types listed in the FREER Project Table shall require approval of the Regional Compliance Officer prior to field review. When it is determined that the scope of the project is unsuitable for Field Review or is beyond the time limitations for field review it shall be submitted to the Office for review and approval as an Expedited Review FR-E-ER project.

NOTE: Time allotment for reviews in the field have been suggested to be limited to one hour. Field Review projects can that included structural may be extended to two hours.

Expedited Review (ER) FR-E-ER projects shall be submitted to OSHPD with plans and specifications for the construction project under an Application for New Project. This can be done electronically through the e-Services Portal (<https://esp.oshpd.ca.gov>) or by submitting the required paper documents to the office serving your facility. FREER MANUAL | 2023 Department of Health Care Access and Information 17`

NOTE: To be eligible for Expedited Review, the estimated review time for each plan review discipline must be less than two hours. If the OSHPD plan review supervisor makes the determination that the time limitations for expedited office plan review will be exceeded, the project will be reviewed as standard plan review and be subject to normal timelines.

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Item #	Category/Item	FR= Field Review	E= Excluded	(E Only) Form 102	ER= Expedited (Office) Review	Remarks
E-6	LIGHT FIXTURES Direct fixture Replacement		✓	YES		<ul style="list-style-type: none"> • Non-essential electrical system circuitry only. • One for one, unlimited in amount. • (Original location only). • VA for replacement fixture is less than or equal to fixture being replaced.
E-7	LIGHT FIXTURES Adding or complete fixture Replacement	✓				<ul style="list-style-type: none"> • Essential electrical system circuitry. • EEOR review required to verify functionality and adequate foot candle levels.

Item #	Category/Item	FR= Field Review	E= Excluded	(E Only) Form 102	ER= Expedited (Office) Review	Remarks
E-8	LIGHT FIXTURES (RE-LAMPING) Re-lamping existing fluorescent troffer or downlight luminaire with UL TYPE A LED Tubes while fixture body remains as original condition		✓	YES		<ul style="list-style-type: none"> One for one tube replacement. Internal luminaire wiring remains unchanged. Fixture body is to remain as original condition due to if changed it could trigger support wiring change.

UL Type A tube, uses existing ballasts, (making ballast compatibility an issue) is designed with an internal driver that allows the tube to operate directly from the existing linear fluorescent ballast

Item #	Category/Item	FR= Field Review	E= Excluded	(E Only) Form 102	ER= Expedited (Office) Review	Remarks
E-9	LIGHT FIXTURES (RE-LAMPING) Re-lamping existing fluorescent troffer or downlight with UL TYPE B LED tubes	✓				<ul style="list-style-type: none"> One for one tube replacement. Ballast is bypassed or removed. Fixture body is to remain as original condition due to if changed it could trigger support wiring change.

Type B – Simplest Total System Ballast Bypass LED Tube – Wired to Mains Description: Like the UL Type A, this UL Type B tube operates with an internal driver. However, UL Type B's bypass ballasts and alter the fixtures internal wiring, the internal driver is powered directly from the main voltage supplied to the existing LFL fixture, requiring several important and unique considerations.

Item #	Category/Item	FR= Field Review	E= Excluded	(E Only) Form 102	ER= Expedited (Office) Review	Remarks
E-10	LIGHT FIXTURES (RE-LAMPING) Re-lamping existing fluorescent troffer or downlight with UL TYPE C LED tubes	✓				<ul style="list-style-type: none"> One for one tube replacement. Ballast is replaced with LED driver. Fixture body is to remain as original condition due to if changed it could trigger support wiring change.

UL Type C LED tubes are relatively uncommon, but offer the most flexibility and efficiency for a lighting system. Unlike a UL Type B LED tube, these do not have the LED driver integrated into the LED tube, and therefore requires a separate LED driver device to be connected between the LED tube and mains electricity.

Summary

- I. For type A replacements, the client could submit form to HCAI – OSH-102 “Request for excluded work” to determine if project or not – if not a project would be considered more of a maintenance effort.

If it is agreed not a project, would not need a design professional involved or any design documents, other than a comparison between lamps to be removed and what they will be replaced with. If it is agreed that it is excluded work then the CO would file an Excluded Work (EW) report which would confirm that this is excluded work and the changeouts could occur without any documentation.

- Would need to schedule with the hospital for timing....
- Would the client need to include any plans with OSH-102?

- II. For type B replacements – this is a project - the client would need to pull a project #, hire a professional to prepare contract documents and submit to OSHPD. Plans will need to show at a minimum:

- Fixtures to be affected on floor plans with rooms identified.
- Lumen comparison for each proposed fixture to have lamp change.
- Brief schedule, plan to address taking down egress lighting.
- Detail on how inverter will be attached to luminaire.
- Any proposed changes to controls.

Plans can be submitted to the CO and they will determine if can be reviewed in the field or if they will be sent to the office for expedited review.

- III. For type C replacements – this is a project- the client would need to pull a project #, hire a professional to prepare contract documents and submit to OSHPD. Plans will need to show at a minimum:

- Fixtures to be affected on floor plans with rooms identified.
- Branch circuiting for fixtures
- Lumen comparison for each proposed fixture to have lamp change.
- Brief schedule, plan to address taking down egress lighting.
- Detail on how/where inverters will be installed – include wiring diagram that calls out all product, ie conduit or MC cable.
- Any proposed changes to controls.

Field Review (FR) and Expedite Review (ER) projects require submission to the office for plan review and application for building permit and applicable fees.

For field review plans need to be submitted via e-services portal. Once submitted, client can check plan review schedule online. When submitting documents for electronic or paper review, the design professional is required to contact the field staff and schedule the review.

For excluded work projects there is not a requirement for submission of plans, building permit , or fees.

Plans can be submitted to the CO and they will determine if can be reviewed in the field or if they will be sent to the office for expedited review.

Note: all cases above are based on the fact that the existing fixture housing is to remain. If the fixture houses are to be replaced, then the design will need to include support wiring design/details

Create a manual (template) –in the form of a spec book, with a written narrative – instructions on what to do for each fixture type. -verify load reduction, equal or increase in lumens – for new fixture bodies, need structural design (wiring and support) ACD or NMA

All products need to be listed, and used in accordance with their listing.

