EAST OF HUDSON
WATERSHED CORPORATION

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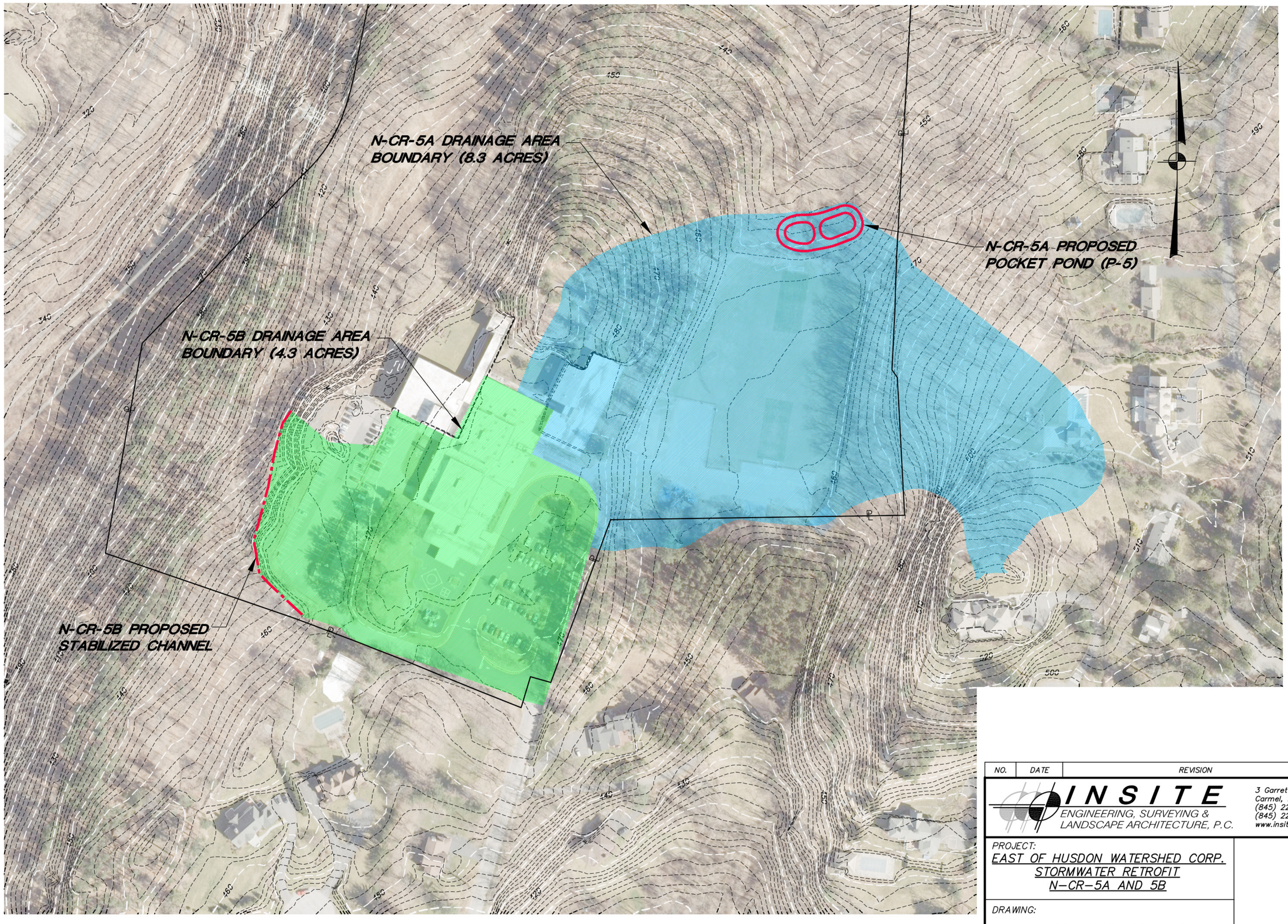
EOHWC Summary and Background

The EOHWC is a Regional Stormwater Entity (RSE) with 19 members (18 municipalities and one County), operating in 18 municipalities and three Counties in the EOH watershed. The EOHWC is governed by a Board of Directors, composed of the chief elected official of each member. The chief elected official may delegate authority to another municipal employee. Each member has passed resolutions to join the EOHWC and authorize implementation of the regional stormwater retrofit plans by the EOHWC on behalf of each member. By forming the RSE, the municipalities were able to pool their resources and approach the NYSDEC mandated phosphorus removal program through "bubble compliance", allowing all the municipalities to aid one another in reaching their total phosphorus goal. Each member municipality brought a different phosphorus removal requirement to the RSE. The Town of New Castle has a requirement of 25.1 kg/yr of removal. Thus far, no projects have been executed successfully within New Castle to meet this goal.

The regional stormwater retrofit plans are a five year plan, beginning in 2010 and ending in 2014, with projects identified for each year. The NYSDEC and NYCDEP have granted EOHWC authority to continue design and construction projects into the 2015 calendar year to complete the program pollutant removal goals.

The Town of New Castle is an active member of the EOHWC committee and RSE as a whole. These combined projects will total 9.17 kg/yr of removal for the corporation and will bring New Castle a large step closer to their goal individual goal. We are very confident in our ability to work with the School District and execute these projects during the summer to the least possible impact to the community.



GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 100 ft.

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

NO.	DATE	REVISION	BY

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PROJECT:
EAST OF HUDSON WATERSHED CORP.
STORMWATER RETROFIT
N-CR-5A AND 5B

DRAWING:
DRAINAGE AREA MAP

PROJECT NUMBER	15144.100	PROJECT MANAGER	J.J.C.	FIGURE NO. 1
DATE	05-04-15	DRAWN BY	M.E.U.	
SCALE	1" = 100'	CHECKED BY	M.J.G.	

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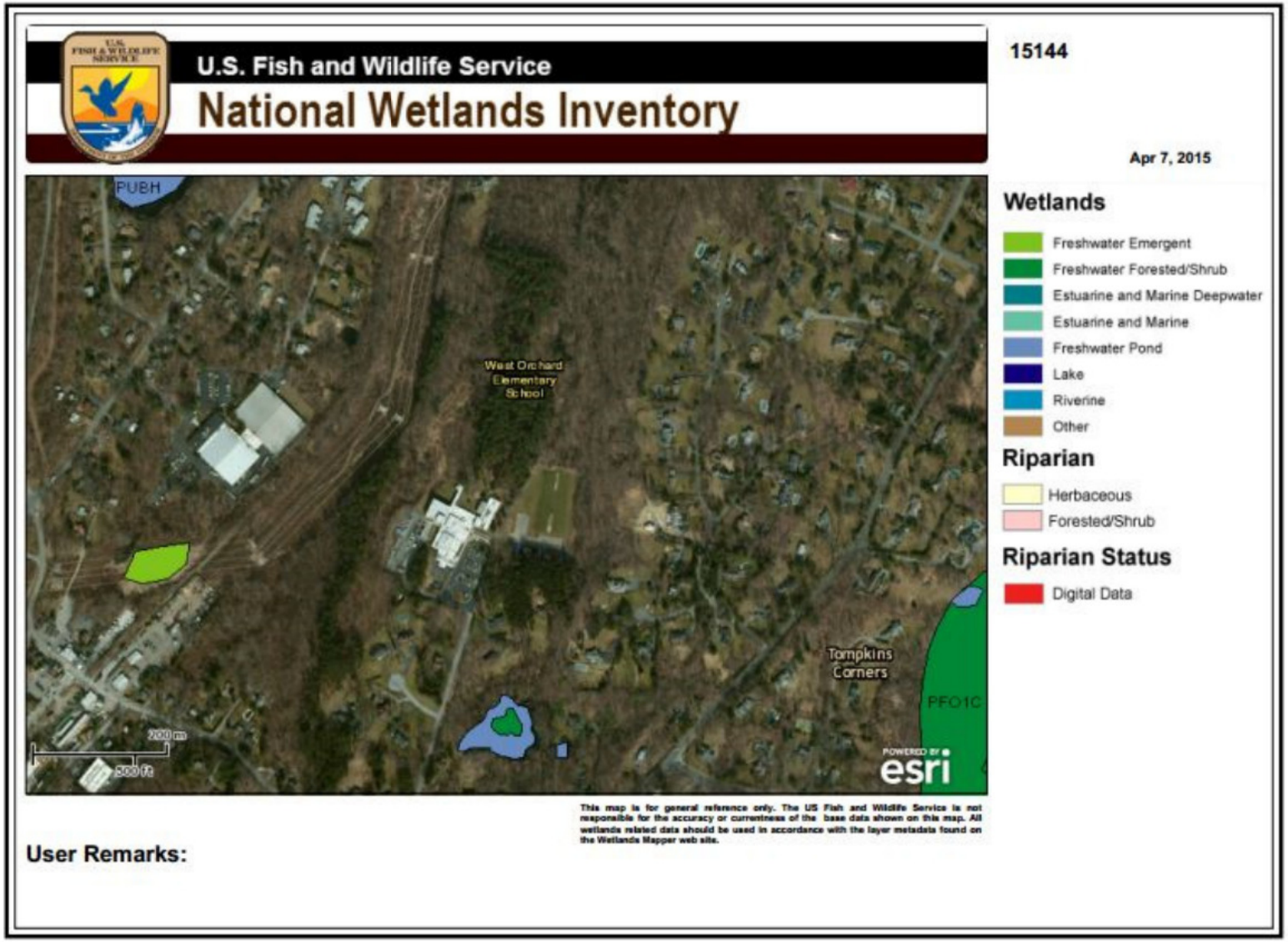

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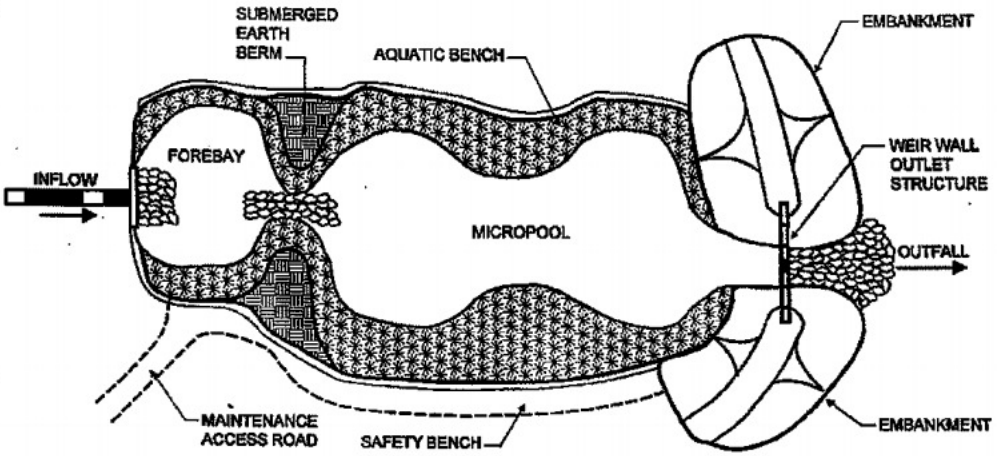
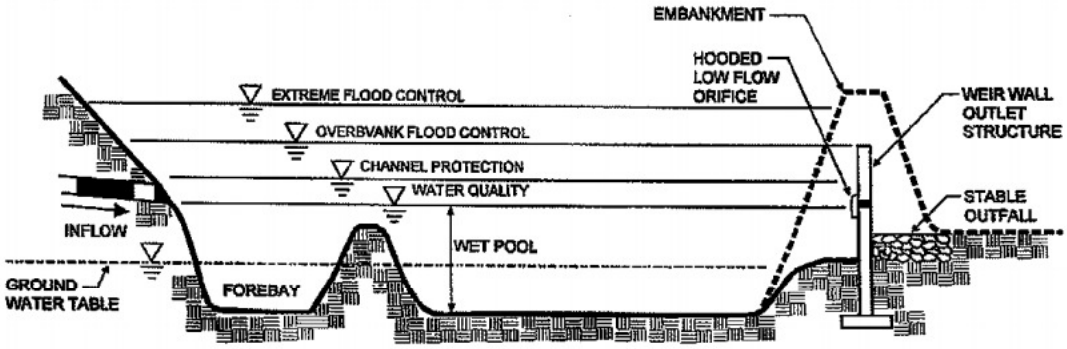
FIGURE #4
TOWN OF NEW CASTLE
EOHWC N-CR-5A & 5B STORMWATER RETROFIT
Source: National Wetlands Inventory
Date: 05-01-15

15144.100

Figure 6.5 Pocket Pond (P-5)



PLAN VIEW



PROFILE

Stormwater Ponds

Description:
Constructed stormwater retention basin that has a permanent pool (or micropool). Runoff from each rain event is detained and treated in the pool through settling and biological uptake mechanisms.

Design Options:
Micropool Extended Detention (P-1), Wet Pond (P-2), Wet Extended Detention (P-3), Multiple Pond (P-4), Pocket Pond (P-5)

KEY CONSIDERATIONS

FEASIBILITY

- Contributing drainage area greater than 10 acres for P-1, 25 acres for P-2 to P-4.
- Follow DEC Guidelines for Design of Dams.
- Provide a minimum 2' separation from the groundwater in sole source aquifers.
- Do not locate ponds in jurisdictional wetlands.
- Avoid directing hotspot runoff to design P-5.

CONVEYANCE

- Forebay at each inlet, unless the inlet contributes less than 10% of the total inflow, 4' to 6' deep.
- Stabilize the channel below the pond to prevent erosion.
- Stilling basin at the outlet to reduce velocities.

PREATREATMENT

- Forebay volume at least 10% of the WQ_v
- Forebay shall be designed with non-erosive outlet conditions.
- Provide direct access to the forebay for maintenance equipment
- In sole source aquifers, provide 100% pretreatment for hotspot runoff.

TREATMENT

- Provide the water quality volume in a combination of permanent pool and extended detention (Table 6.1 in manual provides limitations on storage breakdown)
- Minimum length to width ratio of 1.5:1
- Minimum surface area to drainage area ratio of 1:100

LANDSCAPING

- Provide a minimum 10' and preferably 15' safety bench extending from the high water mark, with a maximum slope of 6%.
- Provide an aquatic bench extending 15 feet outward from the shoreline, and a maximum depth of 18" below normal water elevation.
- Develop a landscaping plan.
- Provide a 25'pond buffer.
- No woody vegetation within 15 feet of the toe of the embankment, or 25 feet from the principal spillway.

STORMWATER MANAGEMENT SUITABILITY

- [X] **Water Quality**
- [X] **Channel Protection**
- [X] **Overbank Flood Protection**
- [X] **Extreme Flood Protection**

Accepts Hotspot Runoff: *Yes (2 feet minimum separation distance required to water table)*

FEASIBILITY CONSIDERATIONS

- [L] **Cost**
- [L] **Maintenance Burden**

Key: L=Low M=Moderate H=High

Residential Subdivision Use: Yes

High Density/Ultra-Urban: *No*

Soils: *Hydrologic group 'A' soils may require pond liner*

Hydrologic group 'D' soils may have compaction constraints

Other Considerations:

- *Thermal effects*
- *Outlet clogging*
- *Safety bench*